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THE ASMAT LANGUAGES OF IRIAN JAYA

by

C.L. Voorhoeve

Department of Linguistics
Research School of Pacific Studies
THE AUSTRALIAN NATIONAL UNIVERSITY

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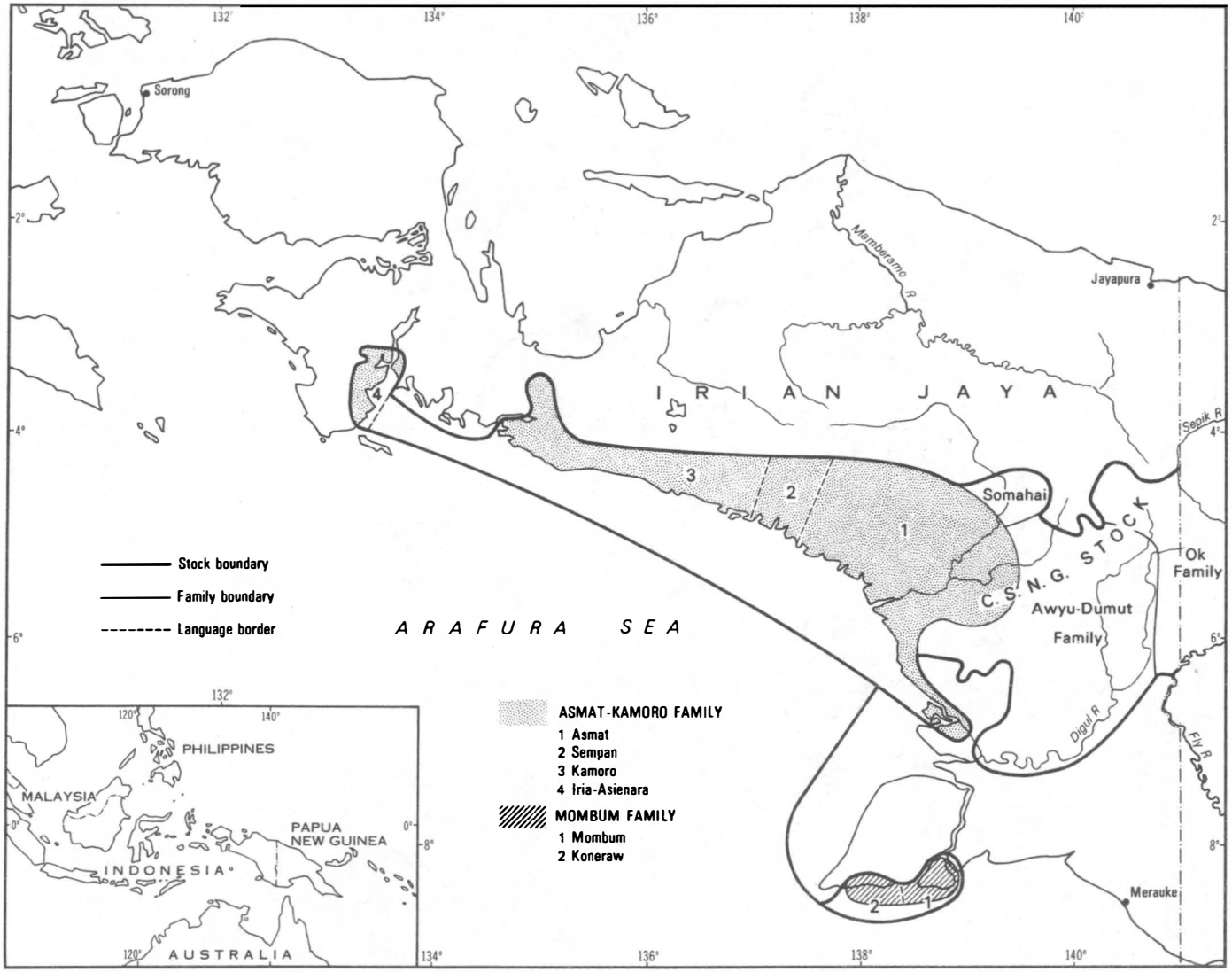

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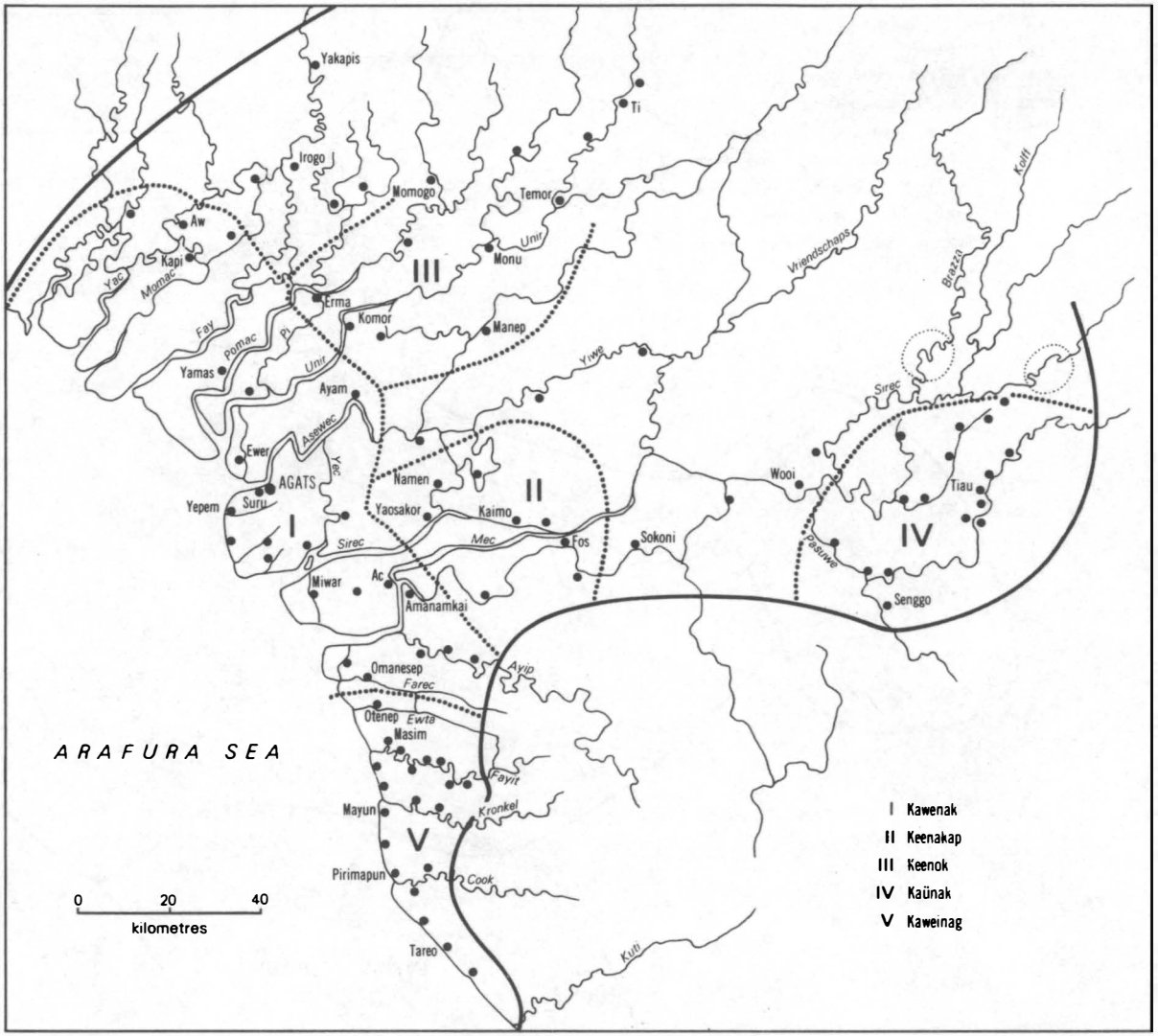

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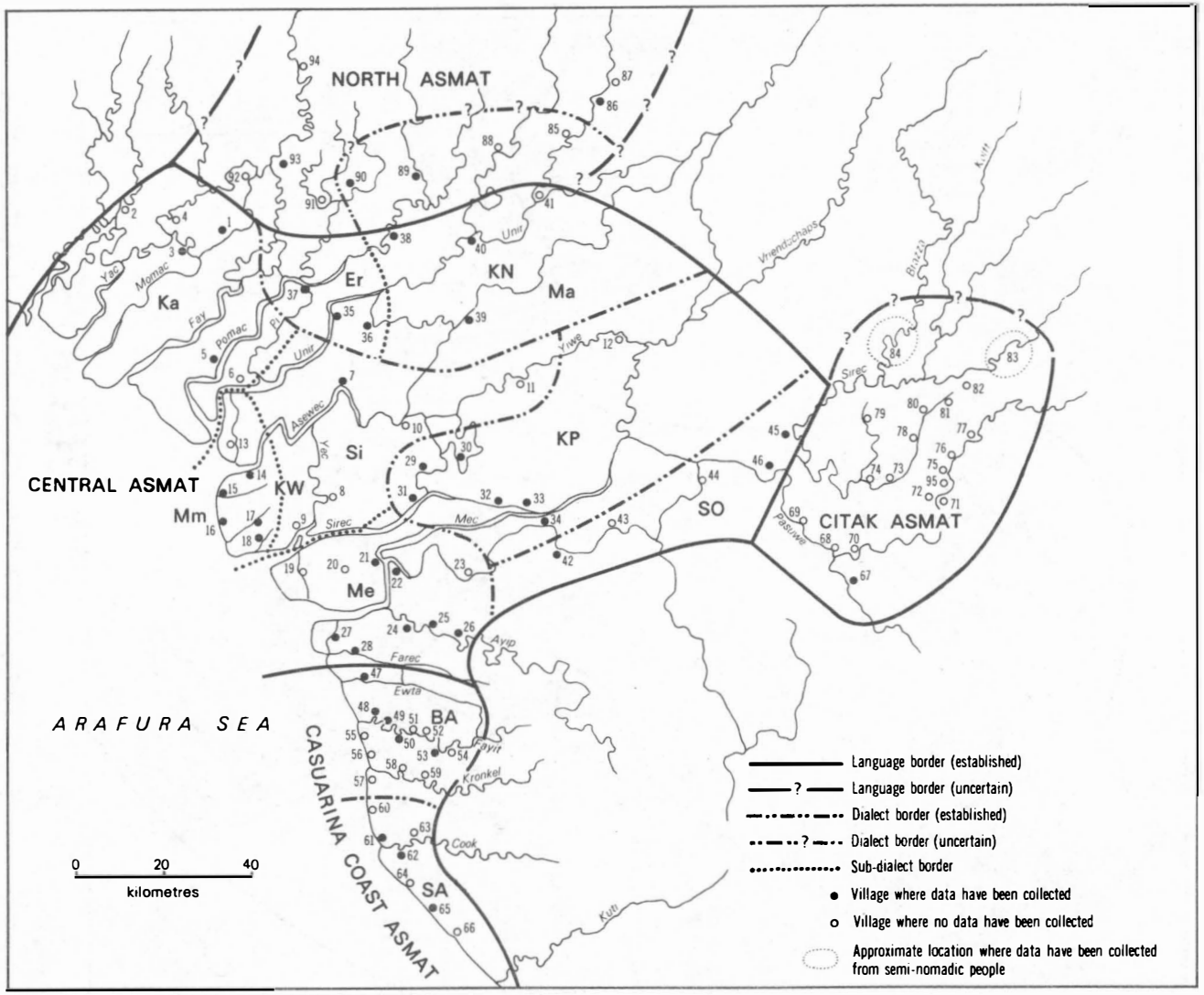

LEGEND: MAP III

Linguistic Divisions:

CA	Central Asmat	Languages
NA	North Asmat	
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CC	Casuarina Coast Asmat	
KW	Kawenak	Dialects
KN	Keenok	
KP	Keenakap	
SO	Sokoni	
TI	Ti-Irogo	
MP	Momogo-Pupis	
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9	Amorep	24	Amisu
10	Mecew	25	Cowew-Yamew
11	Yuni	26	Kawet
12	Muet	27	Yow
13	Ewer	28	Omanesep
14	Suru	29	Namen
15	Yepem	30	Miwar (hutan)

31 Yaosakor
32 Kaimo
33 Awok
34 Fos
35 Komor
36 Yipaer
37 Sawa-Erma
38 Mu-Akani
39 Manep
40 Monu
41 Temor
42 Mine
43 Sokoni
44 Wakanu
45 Yinak
46 Wooi-Karmis
47 Otenep
48 Masim
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53 Makair
54 Taworo
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57 Mayun
58 Simsakar
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60 Kayerin
61 Pirimapun
62 Aorket
63 Saman
64 Emine
65 Tareo
66 Semenoro
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68 Tamanim
69 Epem
70 Abao
71 Fasera
72 Tiurupis
73 Vabak
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75 Tiau
76 Binerbis
77 Vau
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79 Birako
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THE ASMAT LANGUAGES OF IRIAN JAYA

C.L. Voorhoeve

1. INTRODUCTION

According to the most recent classification of the languages of Irian Jaya (Voorhoeve 1975) we find in the eastern part of the Bomberai Peninsula and in the south-western lowlands the Asmat-Kamoro Family with four member languages: Iria-Asienara, Kamoro, Sempan, and Asmat. The Asmat-Kamoro Family together with the Mombum Family, the Awyu-Dumut Family, the Ok Family and the solitary Somahai language are the Irian Jayan members of the Central and South New Guinea (CSNG) Stock (see Map I). The Mombum Family is the closest relative of the Asmat-Kamoro Family; together they form a subgroup within the CSNG Stock.

In this paper I shall be concerned mainly with the easternmost member of the Asmat-Kamoro Family, the Asmat language. I shall deal at some length with its division into dialects and with the question whether we have to do with one single language or with a small group of very closely related languages. Further, I shall indulge in some comparative work and shall present as a result a provisional list of reconstructed Proto-Asmat words. Only occasionally and mostly in the last chapter of this paper shall I have reason to refer to the other languages of the family, and to Mombum.

It has become customary to equate the Asmat language with the language of the 40,000 or so hunting and gathering tribesmen who refer to themselves as the Asmat, Asamot, Asomat, or Asemer people (Drabbe 1963:1). These people occupy a large expanse of lowland

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swamp and rainforest area stretching from the Yac River[1] in the north to the Digul River in the south. North of the Sirec River their territory probably extends all the way to the foothills of the central ranges whereas south of the Sirec it rather abruptly becomes confined to a narrow strip along the coast (see map I, III). The area is generally called 'The Asmat', a name also used as a common denominator of the people living in it.

The idea that one language is spoken in the whole Asmat area finds its roots in the pilot dialect study by Drabbe (1963). In this study which is based on linguistic data from five check points[2] supplemented by locally obtained information on the extent and subdivision of the dialect areas, Drabbe distinguishes five main dialects (see map II):

1. **Kawenak**[3], spoken in the coastal region between the Yac and Ewta Rivers;
2. **Keenakap**, spoken in the region of the upper Mec, middle Sirec, and Sor Rivers;
3. **Keenok**, on the middle course of the Pomac, Unir, and Asewec Rivers;
4. **Kaünak**, in the Citak area to the east of the junction of the Sirec and Pasuwe Rivers;
5. **Kaweinag**, spoken along the Casuarina Coast from the Ewta to the Kuti River.

[1]River names have many local variants. I shall use here the names current among the Asmat people living in the vicinity of the main Government station Agats. All letters used in the spelling of Asmat names can be taken to have their usual phonetic values expect **c**, **m**, and **n**. **c** represents a voiceless alveopalatal stop [ť]; as a rule of thumb, **m** and **n** stand for [b] and [d] respectively at the beginning of words, for [mb] and [nd] when they occur between vowels, and for [m] and [n] in all other cases. More details will be given in chapter 3, section 3.1.2.2.

The only official maps which to my knowledge feature native river names are the old 1 : 100,000 maps of the Dutch Topographical Service, 1956 edition.

[2]Drabbe's data represent Asmat as spoken in Ayam (Kawenak dialect), Namen (Keenakap dialect), Komor (Keenok dialect), Senggo (Kaünak dialect) and Pirimapun (Kaweinag dialect), see map II. The bulk of his dialect study is taken up by a short comparative grammar of the first three dialects. The last two are represented by word lists of 377 items.

[3]The labels chosen by Drabbe mean according to him 'real human being' (from **kawe** etc. *human being* and **nak** *true, real*). In my opinion they mean almost exactly the opposite, see chapter 8.3 no. 279. Also, the label **Keenakap** is not beyond suspicion: one would expect the equivalent of **kawenak** to be **kaenak** in this dialect (its equivalent of **kawe** is **kae**). The form **keenakap** does exist, but means *small* and contains a root **kee** and a diminutive suffix **-nakap**. **kee** and **kae** could be allomorphs; in that case **keenakap** would be comparable to Kawenak **yiwinakap** *small* from **yiwi** *child* and **-nakap**, or **umunakap** *full* from **umu** *top side of an object* and **-nakap**.

Within the Kawenak dialect he further distinguishes four subdialects coinciding with the four regional groups recognized by the coastal Asmat people'. They are: Kainak, Simai, Mismam, and Mecəmup[4]. He mentions that the subdialects are sufficiently similar to be mutually intelligible (1963:3).

Mutual intelligibility is not a criterion he uses with respect to the main dialects. Neither does he use any other formal criteria to establish their dialect status. His classification is impressionistic, but not in a superficial sense. It is based on inspection of a sizeable body of data and his assessment is grounded on a lifetime of field work experience.

Drabbe's dialect study does not cover the far interior and the upper As River area. These regions were still completely unexplored in the late fifties when he worked in the Asmat. Lexical data collected by later explorers[5] from people living on the upper courses of the main rivers seemed upon first inspection to be sufficiently similar to downstream Asmat to suggest that this language is spoken as far north as the foothills of the central ranges.

The present paper intends to fill out and partly correct the picture of the linguistic situation as sketched by Drabbe. It is based on the already published materials (Drabbe 1959a,b; 1963; Voorhoeve 1965) and on unpublished supplementary data collected by Bromley, Eyde, Van Arsdale, and myself[6]. The latter data consist for the most part of word lists of varying length, the shortest counting only a few dozen words, the longest almost 400. The language samples represent a total of 44 separate points within the Asmat area.

[4]The name Kainak has been taken from the Asmat census of cultural groups as quoted in Van Amelsvoort 1964:192. Drabbe does not provide a label for this subdialect. Kainak is a subdialectal variant of kawenak.

[5]Those I know of are two anthropologists, Eyde in 1960 and Van Arsdale in 1974; one missionary-linguist, Don Richardson of the Regions Beyond Missionary Union in 1973, and myself in 1970.

[6]I collected some dialect materials during my first field work in the area (1960-62) and collected more data during a trip through the region in 1970. I am further indebted to David Eyde who gave me a list collected in Momogo, to Myron Bromley who kindly sent me a word list collected in Senggo as well as his tentative phonological analysis of the Senggo dialect of Citak Asmat (Bromley 1973, 1975), and to Peter van Arsdale who sent me a travel report (Van Arsdale 1974) containing five short word lists (listnumbers 33,45,46,83,84). Unfortunately I did not have access to the data collected by Don Richardson.

The organisation of the paper is as follows. First, a number of word lists will be subjected to a lexicostatistical analysis (ch. 2). As a result, two of Drabbe's five dialects will be reclassified as separate languages. A new dialect will be added to the remaining three, and to the three Asmat languages resulting from the reclassification a fourth one will be added. In the following chapters (3-6) each of these languages will be dealt with in more detail. They form the descriptive part of the paper. The last two chapters (7, 8) are of a comparative nature. Chapter 7 gives a short description of Proto-Asmat phonology and traces the sound changes that took place in the present-day Asmat languages. Chapter 8 contains an annotated list of reconstructed Proto-Asmat words together with the data on which they are based.

To help the reader to find his way in the mass of data presented in chapter 8, an index of English glosses and an index of Asmat words have been added (Appendices I and II). They are followed by a list of approximate numbers of Asmat speakers on the language, dialect, and village level (Appendix III) and a list of phonetic symbols used in the text (Appendix IV). Five maps, notes, and bibliographical references complete the paper.

Before proceeding with the second chapter it will be necessary to identify the fortyfour language samples mentioned above. Throughout the paper they will be referred to either by the name of the villages or location where they have been collected or, more frequently, by their list numbers as given in the legend to map III. In the list below I have indicated the linguistic affiliation of the language samples according to Drabbe's classification but I have replaced his labels Kaünak and Kaweinag by the more generally accepted names Citak and Casuarina Coast. Names of villages where in addition to lexical data also grammatical data have been collected are starred.

Villages/locations where linguistic data have been collected:

Linguistic affiliation	List number	Name
Kawenak (KW)		
Kainak (Ka):	1.	Atat
	3.	Kapi
	5.	Yamas
Simai (Si):	7.	Ayam*
Mismam (Mm):	14.	Suru*
	15.	Yepem*
	16.	Per
	17.	Uwus

Mecəmup (Me):	21.	Ac*
	22.	Amanamkai*
	23.	Amisu*
	24.	Cowew
	26.	Kawet
	27.	Yow
	28.	Omanesep
Keenakap (KP)	29.	Namen*
	30.	Miwar (hutan)
	31.	Yaosakor
	33.	Awok
	34.	Fos
Keenok (KN)	35.	Komor*
	36.	Yipaer
	37.	Sawa-Erma*
	38.	Mu-Akani
	39.	Manep
Casuarina Coast (CC)	47.	Otenep
	48.	Masim
	49.	Muepis
	50.	Nanew
	53.	Makair
	61.	Pirimapun
	62.	Aorket
	65.	Tareo
Citak (CI)	67.	Senggo
Unclassified (not in Drabbe 1963)	42.	Mine
	43.	Sokoni
	45.	Yinak
	46.	Wooi
	83.	Upper Sirec (location)
	84.	Brazza River (location)
	86.	Ti
	89.	Momogo
	90.	Pupis
	93.	Irogo

2. LEXICOSTATISTICAL SURVEY

2.1. Preliminaries

It is generally acknowledged by field workers that lexicostatistics can provide preliminary classifications which can serve as a point of departure for further research (McElhanon 1971). It is further a widely shared experience of field workers in New Guinea that the test list of Swadesh cannot be applied in its entirety. Some of its items are simply not found in New Guinea, others involve the repetition of the same vernacular item, still others may prove to be extremely difficult to elicit. Thus McElhanon found that of Swadesh's 100 item list only 87 were usable in the non-Austronesian languages of the Huon Peninsula and that of Swadesh's 215 list only 150-160 might be usable (1971:127). My own experience is similar to McElhanon's. In an attempt to make the results comparable to those obtained by the use of the full lists, some investigators have adjusted the percentages, others have supplemented the shorter lists with items not found in the Swadesh list but more suited to the local circumstances or with such items as allowed optimal use of the available lexical data[7].

Subjecting the Asmat data to a lexicostatistical analysis met with an additional difficulty: the fact that the collected word lists were of a widely varying length and composition. I have approached this problem in the following way: first, I devised a test list of 204 items counting 141 items of Swadesh's 215 item list and 63 supplementary items. This list (List I) I used to calculate the cognation percentages shared by KW, KP, KN, CC, and CI, using the fullest lists on hand, viz. Drabbe's lists of Ayam (KW), Namen (KP), Komor (KN), Senggo (CI) and Pirimapun (CC)[8] and my own list of Suru (KW). Since

[7]Adjusting the percentages is based on the experience that shorter versions of the Swadesh list usually give somewhat higher percentages than the full list. Such lists usually contain the more easily obtainable words, mainly nouns and a few basic verbs which perhaps have a higher retention rate than other word classes. In an earlier publication I subtracted one percent for every ten items the list was short of the full (adopted) Swadesh list. However, when the number of supplemented items becomes quite high - as was the case with the lists used here - the assumption does not hold any longer, see below p. 7.

Replacing missing items by others moreover can have a significant effect on the results. McElhanon found that different classifications resulted when he supplemented his Swadesh list with different sets of items and consequently he refrained from supplementing the Swadesh list at all (McElhanon 1971:128). In the present case the paucity of data made it necessary to use whatever non-cultural items were available to compile lists sufficiently long for lexicostatistical use.

[8]Drabbe's lists number 377 items. Still, they do not contain quite a few items of the Swadesh lists which normally would not have to be omitted.

31 items of test list I were not in any of the shorter word lists I set up a second test list (list II) of 193 items. Of these it shared 173 items with list I; 20 items not found in I were added[9]. List II contained 143 items of Swadesh's 215 item list.

However, the actual number of items of list II that could be used for the calculation of cognation percentages varied from one case to another due to the uneven length of the collected word lists and the randomness of the gaps in them. Thus almost every pair of word lists shared a different number and combination of items of list II.

Under such circumstances it is impossible to adjust the percentages. There is no certainty that use of the full test list would in any case have produced a lowering of the percentage according to a determinable scale. In fact, in the few cases in which I was able to compare results yielded by a shorter and longer version of test list II, the cognation percentage remained approximately the same or even rose slightly. A valid question is whether given these facts the results yielded by list II have any value as indicators of genetic relationship. The answer in my opinion is that they indeed have such value provided the objective is no more than to get a broad outline of genetic relationships. The picture is not as black as it seems. Firstly, for all the differences between the collected word lists there still is a considerable overlap between them. Secondly, we are here dealing with fairly high cognation percentages giving less room for wide variation in the results than low percentages would - provided the results are based on lists of approximately the same size[10].

[9] In order to make optimal use of the available data, cf. note 7.

[10] This point may be illustrated by the chart below which has to be read as follows: 'If a 100-item list would yield a cognation percentage of A percent, then a defective list of B items could be expected on mathematical grounds to give results varying from C to D percent':

A	B	C - D	Variation
100	0 - 100	100	0
90	80	87-100	13
	70	85-100	15
	60	83-100	17
60	80	50-75	25
	70	57-86	29
	60	67-100	33

In the next section I shall present and discuss the cognation percentages yielded by test list I. These percentages are mutually fully comparable, being based on practically identical lists. They will serve as a point of reference for the discussion of the percentages produced by the shortened versions of list II.

2.2. Test List I

Chart I: cognation percentages shared by Suru, Ayam (KW), Komor (KN), Namen (KP), Senggo (CI) and Pirimapun (CC).

Chart I

	KW		KN	KP	CI	CC
	Suru	Ayam	Komor	Namen	Senggo	Pirimapun
Su		204	202	203	198	201
Ay	98		202	203	198	201
Ko	87	86		200	195	199
Na	89	90	85		196	200
Se	75	76	76	75		195
Pi	79	78	74	77	68	

Number of items counted

Cognation percentages

The cognation percentages appear to fall into four distinct levels: 1. 98%, 2. 85-90%, 3. 74-79%, and 4. 68%. The minimum difference between 1. and 2., and 2. and 3. is 8%; between 3. and 4. it is 6%. The 68% shared by Senggo and Pirimapun falls below the criterion percentages used by most investigators to distinguish between language and dialect[11], and well below the 81% adopted by Swadesh. On the basis of this percentage CI and CC can be classified as separate languages. The percentages of level 2 all fall within the range expected of dialects and show that KN, KP, and KW definitely are dialects of one language. I shall call this language Central Asmat (CA). The 98% shared by Suru and Ayam is indicative of the percentages we may expect to be shared by the subdialects of KW.

[11]There is a wide range of opinion concerning which percentage represents the language-dialect boundary. McElhanon (1971) lists nine investigators of New Guinea languages who used between 80% and 86%, twelve who used between 70% and 80% and four using even lower percentages (54%, 60%, 62%, 65%) as the criterion percentage.

The percentages of level 3 are those shared by the three dialects of CA on the one hand and Senggo and Pirimapun on the other. Some investigators have allotted language samples sharing percentages in this range (74%-79%) to the same language (see note 11). I prefer to classify CA, CI, and CC as separate but closely related languages for the following reasons:

> firstly, there is a clear gap between the percentages of level 3 and those of level 2;
>
> secondly, CA geographically occupies the middle ground between CC and CI, and one can expect the percentages shared by CA and CI, and by CA and CC to be higher than the one shared by CC and CI.

Summarising: the percentages of chart I allow us to distinguish three separate but closely related languages in the Asmat area, one of which is divided into three dialects.

2.3. Test List II

Now we come to the percentages produced by the various shortened versions of test list II. First I shall deal with the cognation percentages shared by some of the Central Asmat lists in the following order: KW lists, KP lists, KN lists, the Sokoni list, the Momogo, Pupis, and Irogo lists. Then the CC lists will be discussed shortly. The only CI list on hand has already been dealt with in the previous section.

2.3.1. The KW Lists

The percentages shared by some of the KW lists - only those counting 70 items or more - have been set out in chart II. They represent the four subdialects postulated by Drabbe. Kainak is represented by the Atat list, Simai by the Ayam list, Mismam by the Suru list, and Mecəmup by the lists of Amisu and Omanesep. The percentage shared by Ayam and Suru has been taken from chart I to serve as a reference point for the other percentages.

Chart II

	(Ka) Atat	(Si) Ayam	(Mm) Suru	(Me) Amisu	(Me) Omanesep
Atat		127	127	84	95
Ayam	99		204	98	114
Suru	95	98		98	114
A'su	97	100			71
O'sp	96	97	98	98	

Number of items

Cognation percentages

The underlined figures have been taken from chart I.

From the figures in the chart it can be concluded that the cognation percentages within KW lie in the high nineties. I do not expect that filling out the lists would result in significantly lower percentages. The results tally well with the one percentage based on test list I. Further it is clear that the results shown here do not allow a subdivision of KW, although Atat seems to be somewhat closer related to Ayam than to Suru. More data are needed to establish whether lists of the same 'subdialect' indeed share somewhat higher percentages than lists belonging to different 'subdialects'. This is true at least for the Mismam villages of Suru and Yepem whose vocabularies share 100% cognates in the full test lists I and II. (For this reason Yepem has not been entered separately on the chart.) The Amisu-Omanesep figure is not conclusive as it is based on a fairly short list.

2.3.2. The KP Lists

Chart III shows the cognation percentages shared by three KP lists. To contrast these with the percentages shared with a list in another dialect I have added those shared with Suru (KW). As before, the underlined figures have been taken from chart I. They show that the short lists probably give somewhat deflated results. Two very short lists, one from Yaosakor and one from Awok have not been included. Given the shortness of the Fos and Miwar lists the figures cannot be conclusive although they tend to confirm that in Namen, Fos, and Miwar the same dialect is spoken. The most significant feature of the chart is the 'jump' between the figures in the first and those in the second column.

Chart III

	KW	KP		
	Suru	Namen	Fos	Miwar
Su		203	51	63
Na	89		47	60
Fo	84	94		27
Mi	86	93	100	

Number of items

Percentages

2.3.3. The KN Lists

Of the five lists collected only the MU-Akani list is too short to be usable. The remaining four share between 93%-97% cognates. With Suru of the KW dialect they share between 79%-87% cognates, 6%-16% lower than the previous figures, see chart IV. There are good grounds then to assign the four KN lists, Komor, Sawa, Yipaer, and Manep, to the same dialect.

Note that the percentage shared by Suru and Komor is considerably higher than the other percentages in the first column. It is possible that the figure is somewhat inflated because Drabbe's list appears to have been collected from a man of Ayam (KW) who had been living for many years in Komor[12]. The figure shared by Suru and Yipaer is very low but it may reflect the relative shortness of the Yipaer list. If the 82% shared by Manep and Suru is a reliable indication of the level of relationship between KW and KN, then KW and KN are less closely related than KW and KP (cf. chart III). Manep and Namen (KP) share 82% cognates in a 111 item list. It seems that KW and KP group together as against KN[13].

[12]At the time Drabbe collected his data he seems not to have been aware of the fact that his Komor informant originally came from Ayam. This came to light much later; I myself learned about it only during my second visit to the Asmat in 1970. It explains the remark made by Drabbe on p. 3 of his dialect study that 'we find in Keenok a fair number of synonyms; of each pair one always seems to belong to the Kawenak dialect' (translation mine). A list collected by myself in Komor shows that in so far as Drabbe's list and my list overlap, Drabbe's list is substantially correct. Still, it is not impossible that some Kawenak words found their way into the remainder of his list.

[13]Supporting evidence is found in the traditions of the coastal Asmat people, see 3.3.2.

Chart IV

	KW	KN			
	Suru	Komor	Sawa	Manep	Yipaer
Su		202	151	114	86
Ko	87		149	110	85
Sa	81	97		109	84
Ma	82	93	94		76
Yi	79	94	94	96	

Number of items

Percentages

2.3.4. The Sokoni List

One of the villages not classified by Drabbe but included in the Mecəmup group by the Asmat Census of Cultural Groups (Van Amelsvoort 1964:193) is Sokoni on the As River. A list collected in this village shares the following percentages with Suru, Ayam, Amisu, and Atat (KW), Namen (KP) and Komor (KN):

Chart V

	KW				KP	KN	
	Suru	Ayam	Atat	Amisu	Namen	Komor	
So	97 / 84	97 / 85	66 / 85	54 / 85	87 / 87	86 / 86	No. of items / Percentages

The percentages Sokoni shares with the KW lists are well below the figures one would expect of a subdialect of KW. They are of the same order as those shared with KP and KN and suggest that Sokoni (SO) represents a separate dialect of CA. This is supported by the percentages it shares with Senggo (CI): 74% of 88 items, and with Pirimapun (CC): 73% of 83 items.

2.3.5. The Momogo, Pupis, and Irogo Lists

The Asmat Census of Cultural Groups (Van Amelsvoort 1964:193) includes the northern village of Momogo in the Yopmagau group which is the group speaking the Keenok dialect. Linguistically however Momogo does not seem to be intimately related to this group at all. Like the

CI and CC lists the Momogo list seems to represent a separate language which is closely related to Central Asmat. I have labelled it North Asmat (NA). A selection of the percentages shared by Momogo and the CA, CI, and CC lists is given in chart VI.

Chart VI

	CA					
	KW					
	Komor Sawa- Erma Yipaer Manep	KP	KW	SO	CI	CC
		Namen	Suru	Sokoŋi	Sengo	Pir'pun
Momogo	73 68 71 60 69 61 71 75	87 / 75	94 / 72	38 / 73	81 / 74	84 / 72
No. of items						

Percentages

The Pupis and Irogo lists are very short but share enough cognates with the Momogo list to suggest that they belong to the same language. The cognation percentages are: Pupis/Momogo 90% (40 items), Irogo/Momogo 93% (32 items), Irogo/Pupis 100% (26 items).

2.3.6. The Casuarina Coast Lists

Of the eight lists collected three are too short to be used here. Two of the longer lists, viz. those of the northern villages Masim and Otenep are virtually identical, and for that reason only the Otenep list has been included in chart VII below. The remaining three are those of Pirimapun and Aorket in the centre of the CC area and of Tareo in the south. All except the Pirimapun list are fairly short and the percentages do no more than show that one and the same language is spoken in the four villages. We shall see later in chapter 6 that the CC Asmat distinguish two regional groups and that the lexical data point towards the existence of two dialects coinciding with those groups. Otenep would belong to one of the dialects, the other lists to the other. The difference however is too slight to show up in the present figures.

Chart VII

	Otenep	Pirimapun	Aorket	Tareo
Ot		79	38	40
Pir	99		58	63
Aor	94	96		43
Tar	97	97	100	

Number of items

Percentages

2.4. Summary

The lexicostatistical figures presented above allow us to distinguish within the Asmat area four closely related languages whose mutual relationships lie between 69%-79%. They are: Central Asmat (CA), Casuarina Coast Asmat (CC), Citak Asmat (CI), and North Asmat (NA). Central Asmat is spoken in four dialects: Kawenak (KW), Keenok (KN), Keenakap (KP) and Sokoni (SO). They share between 84% and 90% cognates. No further division into subdialects as claimed by Drabbe is apparent in KW. Lists representing one and the same dialect share 93%-100% cognates.

The data in CC are still insufficient to signal the presence of dialects. The same applies to CI and NA.

3. CENTRAL ASMAT

I shall begin this chapter by presenting some general observations on the phonology and grammar of Central Asmat. We shall need this information when discussing the CA dialects and when we compare CA with CC, CI, and NA.

The sections following those observations will be devoted to a more detailed discussion of each of the four dialects. They will be further defined in terms of their phonological, lexical and grammatical characteristics and where the data allow it something will be said about subdialectal differences. Also the dialect boundaries will be tentatively established. The element of uncertainty is due to the fact that we still need to rely partly on local opinion, that is on what people in one village say about the language spoken in other villages known to them but not represented in the language samples.

3.1. Phonological Observations

3.1.1. Syllable and word structure

Six types of syllables are found in Central Asmat: V, CV, VC, CVC, VCC, and CVCC (V = vowel phoneme, C = consonant or semivowel phoneme). Nasal consonants can occur as peak of phonetic syllables; on the phonemic level they form part of the complex phonemes /m/ and /n/ (cf. 3.1.2.2.): [a'tɑpmbɔf̌ɛs] = /atapmores/ *they planted it*[14]. VCC and CVCC-type syllables are found only in the KN dialect. Consonant clusters are always non-geminate[15]. In all dialects they occur intervocalically and only in KN also word-finally. Word-medial consonant clusters usually are the result of compounding, derivation, or flection. In monomorphemic words they are rare and when they occur comparative evidence often shows that the two consonants originally were separated by a vowel or that they signal an old morpheme boundary. Vowel sequences seem to be restricted to two vowels[15].

In KW, monomorphemic words seldom count more than two, and never more than three syllables. Three-syllable words probably have a polymorphemic origin. In the other dialects monomorphemic words of three syllables are much more common; they always end in a vowel. Comparative evidence shows that these final vowels have been dropped in KW. Thus many CVCVC words in KW have a corresponding form CVCVCV in the other dialects.

3.1.2. The Sound System

3.1.2.1. The CA phonemes

The following phonemes are common to all CA dialects:

p	t	k			
m	n		i		u
f	s		e		o
w	y			a	
	r				

In addition, KW has an alveopalatal stop /c/ and a central vowel /ə/. Only the phonology of this dialect has been analysed in some depth. The data in KP, KN, and SO are insufficient for such an analysis and therefore several problems could not be solved. Thus it seems possible that all three dialects have a phonemic voiced

[14] Unless stated otherwise I have taken the examples from my Suru (KW, Mm) data.

[15] See the postscript (p. 122), point 1.

labio-dental fricative /v/, that KP and SO have two rounded front vowels /ü/ and /ö/ and that SO has a voiceless glottal fricative /h/. On the basis of the present evidence I have analysed [ɓ] as an allophone of /w/, and SO [h] as a separate phoneme /h/, while the status of [ü] and [ö] remains undetermined.

3.1.2.2. The allophones and their distribution

In view of the fact that the phonologies of KN, KP, and SO have not yet been analysed in detail I shall in this section distinguish between two kinds of statements:

1. statements which seem to hold for all CA dialects;
2. statements concerning features which I have observed in only one or some of the dialects. They leave the generality of these features out of consideration, and probably will have to be modified when more data come to hand.

The latter are set off from the general statements by double space and indentation.

/p/: [p, b, ɸ, ɓ, p^w, p^m][16]

Word-initially and medially in consonant clusters: [p].

In KW, [p^w] is found in word-initial position preceding /e/, especially in the speech of old people. The younger generation tends to replace [p^w] by [p][17].

Word-finally: [p] which often is unreleased.

In Suru and Yepem (KW, Mm) final /p/ sometimes has a nasal release [p^m] when it is followed by a hesitation pause.

Intervocalically the following allophones alternate: [p,b,ɓ,ɸ]. The voiced and fricative allophones occur much more frequently in the KN and SO data than in the KW and KP data. It seems that although all

[16] For practical reasons I have adopted the phonetic notation of Pike 1947; see Appendix IV.

[17] Possibly due to the influence of the Indonesian language which has been the language of education in the Asmat area from the first introduction of schools in 1952.

dialects have the same range of allophones of /p/ in this position, dialectal differences in frequency do exist[18].

> In Sawa-Erma (51, KN) intervocalic /p/ is [p] when morpheme-initial as is often the case in polymorphemic verb stems[19]. When morpheme-medial, /p/ is realised as [ɓ] if the next consonant is /r/ or /n/ - except when preceded by morpheme-initial /p/. In such a case [p] is found. In other consonantal environments [p], [b], [ᵽ], and [ɓ] seem to alternate freely[20].

/t/: [t, d, t^{y}, t^{n}]

In all positions: [t]. In word-final position [t] is often unreleased.

> In KW, final /t/ sometimes has a nasal release [t^{n}] when followed by a hesitation pause[18].
>
> In KN, [t] alternates with a lightly palatalised allophone [t^{y}] when preceding /i/.

/k/: [k, q, g, $k^{ŋ}$, $q^{ŋ}$, x, ɋ, ɠ]

The backed allophones are restricted to a vocalic environment of low-central and mid-back vowels (/a/, /o/). In such an environment one hears almost always the backed allophones and seldom the non-backed allophones. [k] and [q] occur in all positions. Word-finally they are often unreleased.

> In KW, final /k/ can have a nasal release [$k^{ŋ}$, $q^{ŋ}$] when preceding a hesitation pause.

Intervocalically, [k] and [q] alternate with the voiced and the fricative allophones.

[18] See the postscript (p. 122), point 2.

[19] Note the parallel with the distribution of the reflexes of Proto-Asmat *t in KN (section 7.4.5). The hypothesis advanced there, that the distribution reflects an earlier stage in which the polymorphemic verb stems of today were close-knit verb phrases and that what is now morpheme-initial position was then word-initial position, applies here too.

[20] For example, Sawa [dži'biř] *man*, [pi'piř] *edge of fire place*, [mi-'piř-amis] *go to sleep*, [u'pu, u'bu, u'ɓu] *coconut shell;* [bap] *in front*, ['bab-a] *to the front*.

/m/: [b, ^{m}b, mb, m]

In KW and probably in all dialects of CA /m/ is a complex phoneme whose allophones include a voiced bilabial stop [b], its weakly prenasalised variant [^{m}b], the homorganic cluster [mb] and a voiced bilabial nasal [m]. Word-initially we find [b], [^{m}b], and [m]. In all dialects except KW, [b] seems to be the most frequently occurring allophone, [^{m}b] and [m] turning up only sporadically in the data.

> In Suru (14) and Yepem (15), [b] alternates freely with [^{m}b] in this position. However, when a nasal consonant follows, the alternation is between [b], [^{m}b] and [m], the latter being the most frequently occurring allophone in this environment.
> In Uwus (17), Meriten (18), Yow (27) (KW) I always noted initial [m] whereas in Amisu (24), Omanesep (28) [KW] [m] was noted in some words, [b] or [^{m}b] in others[21].

Intervocalically, we find [m] or [mb]. The most frequently occurring allophones, at least in KN, KP and SO, seems to be [m].

> In Ayam (7), Suru (14) and Yepem (15) in the KW area, [mb] alternates with [m] unless a nasal consonant follows. In that case only [m] occurs. The same rule applies in 14, 15 to /m/ as the second member of a consonant cluster.

In final position, and as the first consonant in a cluster: always [m].

/n/: [d, ^{n}d, nd, n]

Like /m/, /n/ seems to be a complex phoneme in all dialects. The allophonic distribution is similar to that of /m/. Word-initially we find [d], [^{n}d], and [n]. In all dialects except KW, [d] occurs most frequently in the data; [^{n}d] and [n] occur only sporadically. In KW, prenasalisation of [d] is more common.

> In Suru (14) and Yepem (15) [^{n}d] occurs almost exclusively. When a nasal consonant follows, we find [^{n}d] and [n] alternating. In 27 (KW) I noted only initial [n].

[21] Admittedly this could be an indication of the phonemisation of initial [m] and [b, ^{m}b] - we shall see that this has happened in Citak Asmat (chapter 5) - but the data in hand are not sufficient to decide the matter here.

Intervocalically: the allophone most frequently encountered in this position is [n]. Very few instances of [nd] were noted.

> In 14, 15 [nd] alternates with [n] if no nasal consonant follows. In the latter case only [n] is found.

In final position and as the first consonant in a cluster: always [n].

/f/:

In all positions [f]. /f/ in word-final position is found only in KW. In the other dialects this phoneme is restricted to initial and medial positions.

/s/: [s, s̬, s̻, θ, ᵗs]

All allophones except [ᵗs] occur as alternants in all positions; [s] and [s̬] are more common than [s̻] and [θ].

> In part of the Mecəmup area of the KW dialect (22, 24, 28) the fronted and interdental allophones [s] and [θ] are quite common; together they make up about half the instances of /s/ noted. In 37, 39 (KN) I observed a few cases of initial [ᵗs]. In KW and KN /s/ sometimes appears as a very weak fricative which to me sounds very much like a weak glottal fricative [h][22].

/r/: [r̆, r̃]

/r/ does not occur in word-initial position nor as the second member of a consonant cluster. The most commonly occurring allophone is [r̆]; the [r̃], found especially in the speech of younger people possibly is an introduction from the Indonesian language which has been used as the medium of education since the introduction of schools by the Roman Catholic Mission in 1952.

/w/: [w, v]

/w/ occurs in all positions, but in medial and final position this phoneme is well attested only in KW.

[22] However, deliberate pronunciation of intervocalic /s/ as [h] always met with a good deal of merriment on the part of my informants.

I noted [v] in word-initial position in KN, KP, and SO and tentatively assigned it to /w/ since in a few cases alternation of [v] and [w] occur in the data. However, [v] seems to have phonemic status in Citak Asmat (see Chapter 5.2) and the possibility cannot be excluded that such is the case in KN, KP, and SO as well.

/y/: [j, ǰ, z, ž, dz, ð, dð]

The greatest variety of allophones is found in initial position but not all allophones are found in all dialects. In KW one finds only [j] and [ǰ]; in KN, KP, and SO they occur too, but more common are the voiced sibilants [z, ž, dž]; [ð] and [dð] seem to be restricted to SO.

Medially and finally only [j] occurs.

/c/: [č, tʏ]

As mentioned above (3.1.2.1) this phoneme is restricted to the KW dialect. It occurs in all positions except as the first member of a consonant cluster. When compounding, derivation or flection cause a final /c/ to become part of a cluster it is replaced by /t/. The allophone [tʏ] is found only in final position where it alternates with [č].

/h/: [h]

I have tentatively set up this phoneme to account for the frequently occurring intervocalic [h] in the Sokoni (SO) data. Historically at least part of the instances of [h] reflect an earlier *s or *f (see sections 7.4.2, 7.4.3). Still, both /s/ and /f/ occur in SO intervocalically. Although no clear cases of contrast with [h] have been found, they do not seem to be mutually exclusive either.

/u/: [u, ŭ, ů, ü]

Generally [u] is found in open syllables and [ŭ] in closed syllables. In an environment of dental and/or palatal consonants they alternate with the fronted allophones [ů] and [ü]. The data in hand suggest that in all dialects dental and palatal consonants have a fronting effect on the back vowels.

In 14, 15 (KW) the fronted allophones occur when /u/ is preceded and followed by a dental or palatal consonant (/t, c, s, n, r, y/).

/i/: [i, ɪ, ü]

Generally [i] is found in open syllables, [ɪ] in closed syllables.

In 14, 15 (KW) [i] alternates with a rounded allophone [ü] when /i/ is followed by /w/. An [ü] which is not an allophone of /u/ and which is not tied to a following /w/ (although this seems to have been the case at an earlier stage of the language, see 7.4.9, 7.5.1) was noted in the KP and SO dialects. It is possible that in these dialects it is a separate phoneme. The case is parallel to that of [ö], see below.

/o/: [o, ɔ, ë]

Generally [o] is found in open syllables, [ɔ] in closed syllables. The fronted allophone [ë] I noted only in the KW and KP dialects. It seems to be restricted to an environment of alveodental and alveopalatal consonants.

In 14, 15 (KW) [ë] alternates with [o, ɔ] when /o/ is preceded by /s/, /t/, or /y/ and followed by /s/, /t/, /c/, or /r/.

/e/: [e, ɛ, ö]

Generally [e] is found in open syllables, [ɛ] in closed syllables. [ö] is an allophone of /e/ in KW; in the other dialects its phonemic status is uncertain[23].

In KW the rounded allophone [ö] occurs only preceding /w/ in closed syllables. In the KP and SO dialects the presence of [ö] is not tied to the presence of a following /w/ (although this seems to have been the case at an earlier stage, see 7.4.9, 7.5.3) and it possibly has to be set up as a separate phoneme. The case is parallel to that of [ü], see above.

/a/: [a, ɑ, æ]

Generally the low-central allophone [ɑ] is found in closed syllables, the fronted [a] in open syllables.

In 14, 15 (KW) [a] alternates with a raised allophone [æ] when /a/ is preceded and/or followed by /i/.

[23]See the postscript (p. 122), point 3.

/ə/: [ə]

In my analysis of the Suru/Yepem variety of the Kawenak dialect (Voorhoeve 1965) I tentatively set up a central phoneme /ə/, occurring in initial and medial position. The mid-central vowel [ə] is found in all dialects but the data in hand are insufficient to establish its phonemic status.

3.1.2.3. Stress and tone

Stress and pitch phenomena have only been studied in the KW dialect. In this dialect stress appears to be phonemic. In my analysis of KW as spoken around Flamingo Bay (Voorhoeve 1965) I found no evidence of phonemic pitch except for a few puzzling cases in which monosyllabic homonyms when contrasted in isolation seemed to carry different tones. Testing in frames however failed to yield supporting evidence. This contrasts with the analysis of the Ayam variety of KW by C. Roesler of the Evangelical Alliance Mission, who distinguishes two tones, a low and a high one. Recently M. Bromley found in Citak Asmat evidence for a tonal system restricted to monosyllabic words, bi-syllabics having phonemic stress (see chapter 5, section 2). In the light of his findings a renewed study of stress and pitch phonomena in KW is certainly needed.

3.2 Some Features of CA Grammar

I shall deal here only with such features of CA grammar as are relevant to the discussion in the rest of this paper. They are primarily features of verb morphology. The description is based on data collected in KW, KP, and KN (see the starred names in the list of p. 4, chapter 1). No grammatical data have been collected in Sokoni but the few verb forms in the Sokoni list are morphologically not different from comparable forms in the other dialects. One can expect that most of what is written below will hold for SO as well. The examples have all been taken from my Suru data.

Central Asmat is a morphologically complex language. As in most languages of the Central and South New Guinea Stock the morphological complexity is entirely found within the verb system. There is little morphology outside the verb class. Verbs take prefixes as well as suffixes. Prefixes mark a variety of aspects or modes (prioritive, completive, explicative, prohibitive, interrogative, requisitive). A verb contains either one or no prefix. Suffixes mark aspect or mode, tense, object, and subject, generally in this order. Subject

marking distinguishes between 1st, 2nd, and 3rd person singular, dual, and plural, but only in KP and KN. In KW dual forms are archaic and are not used except in traditional texts. CA further has the capacity of forming verb stems of considerable morphological complexity. A verb stem can consist of a single root, several roots, or one or more roots plus a number of formatives expressing voice (benefactive, causative, transitive), mode (tentative) or aspect (comitative, completive). A few verb roots can take infixed formatives, e.g. fiw *enter*, fomiw *enter in the company of*. A few verbs undergo vowel changes in the stem according to the number of the object, e.g. tew *to take one thing*, taw *take many things*; a few have suppletive roots instead: mit *stab (one object)*, faw *stab (more than one object)*. Reduplication of verb roots marks repetitive action.

Examples of polymorphemic verb stems are:

yik-tam-por *tie up* - benefactive - tentative = *to try to tie (something) up for somebody*, containing one root and two formatives.

si-sim-ka-kami-m-tiw *to wash ashore many objects* which contains the reduplicated root sim *to push*, the reduplicated root kami *press (heavily) on*, a causative marker m and the root tiw indicating that the verb object is lying on the ground as a result of the action denoted by the verb.

There is a category of verb forms which indicates that the action is followed by another one by the same actor(s). They have different markers according to the tense, distinguishing recent past versus immediate past-present-future. The recent past forms could perhaps be called medial verbs - I at least have never found them at the end of a sentence. The immediate past, etc. forms, however, do occur sentence-finally and then have a hortative or imperative sense: mar atow e-ac-om, ... *ball play do-after-we = after we have played soccer (we'll go home)*; mar atow e-ac-om-a! *Let's first play soccer!*

These 'anteriority forms' as I labelled them (Voorhoeve 1965:114) do not seem to occur in the KP dialect (Drabbe 1963:58)[24].

Outside the verb system there is very little morphology. Nouns can take one or two diminutive suffixes and a few nouns have morphologically marked plural forms:

cem *house*, cem-nakap *small house*, cem-nakap-iriw *very small house*; ar-epus *his older brother*, ar-epucəwes *his older brothers*. In a few cases -nakap derives adjectives from nouns: yiwi *child*, yiwi-nakap

[24]See the postscript (p. 122), point 4.

small. The same suffix can be added to adjectives and then signals a high degree of smallness: fano *narrow*, fano-nakap *very narrow*.

Personal pronouns take three suffixes indicating exclusion, inclusion, and opposition: nor *I*, nor-pa *I only*, nor-am/nam *I too*, nor-ma *I myself*[25].

3.3. The Dialects

The four lexicostatistically established dialects of CA appear to have a number of phonological, grammatical and lexical characteristics which by themselves or in combination with each other define the dialect boundaries. The regional distribution of those features is shown by the isoglosses drawn in map IV.

I shall describe the features characterising the CA dialects in strictly synchronic terms. After the description of each feature I have added a reference to the corresponding isogloss on map IV.

Later, in chapter 7, we shall see that several of these features can be formulated more simply in diachronic terms. The isoglosses of historically diagnostic features are given in map V.

3.3.1. The Kawenak dialect

The Kawenak dialect is the coastal dialect of Central Asmat. It is spoken by about 13,000 people divided into four regional groups: the Kainak, Simai, Mismam, and Mecəmup (map III). At least twentyfive villages speak the KW dialect[26]. To these may perhaps be added the three upstream villages Mecow (10), Yuni (11) and Muet (12). Government reports quoted in Van Amelsvoort 1964:192, and Van der Schoot 1969:14, include them in the Simai group but Drabbe (1963:4) assumed that Mecow (Drabbe: Mbatiö) and Muet belong to the Keenakap dialect. Since neither linguistic data nor local opinion is available to guide us here we must leave the matter undecided[25].

The villages where KW is spoken are listed below, ordered according to the regional groups. The village numbers correspond to those on map III.

[25] See the postscript (p. 122), point 5.

[26] The KW dialect is also spoken in one or two villages situated on one of the islands in the delta of the Digul River. They consist of people of the Sarew, Yokor, and Sesakam clans of the Simai group, whose ancestors migrated at the beginning of this century from their village on the lower Sirec River to their present location. There still is a fair amount of contact between them and the people of Amorep.

Kainak[27]

1. As-Atat
2. Nakai
3. Kapi
4. Ao
5. Yamas
6. Yaun-Yuferi

Simai

7. Ayam
8. Warse
9. Amorep

Mismam

13. Ewer
14. Suru
15. Yepem
16. Per
17. Uwus
18. Meriten

Mecəmup

19. Miwar (laut)
20. Atamuc
21. Ac
22. Amanamkai
23. Ar-Nanim
24. Amisu
25. Cowew-Yamew
26. Kawet
27. Yow
28. Omanesep

Simai or KP

10. Mecow
11. Yuni
12. Muet

(However, see the postscript, p. 122, point 5.)

The most important phonological characteristic of KW is the presence of the alveopalatal /c/ which corresponds to /t/ in KP and to /t/ or /r/ in KN and SO. It is a feature KW speakers are well aware of and the change of /c/ into /t/ figures prominently in their mimicking of other dialects.

KW is further characterised by the absence of the [v] allophone of /w/ (isogloss 2) and the presence of only two of the seven allophones of /y/, [j and ǰ] (isogloss 3).

Grammatically KW distinguishes itself from KN and KP by the lack of productive dual number of verbs (cf. 3.2) (isogloss 4).

We have seen that Drabbe distinguishes four subdialects in KW, coinciding with the four regional groups (chapter 1, p. 2).

[27] It is known that in the past As, Atat, and Nakai formed one settlement, and also Ao and Kapi once formed one village. According to local tradition Nakai and Yaun are linked with the Mismam group, and Kapi, Ao, Yamas, and Yuferi with the Simai. However, the available linguistic evidence does not confirm such a division of the Kainak group.

The data on hand only partly support this view. The only systematic differences between local varieties of KW which seem to coincide with regional groups are the general absence of intervocalic and word-final /w/ in Kainak - a feature it shares with KN, KP, and SO - and the frequent raising of /o/ to /u/ and /a/ to /e/ in Mismam (isoglosses 5, 6). But the areas in which we find /m/ realised only as [m], and /s/ with interdental allophones [s,θ], do not coincide with regional groups. The former cuts across the Mismam-Mecəmup border, the latter seems to cover only part of the Mecəmup area (isoglosses 15, 16).

3.3.2. The Keenakap dialect

It is certain that this dialect is spoken in the following villages:

29. Namen
30. Miwar (hutan)
31. Yaosakor
32. Kaimo
33. Awok
34. Fos

As mentioned above (3.3.1) KP possibly is also spoken in the villages Mecow, Yuni, and Muet[28]. The total number of KP speakers is at least 1500 and about 1900 if the three latter villages can be included.

Lexicostatistically KP seems somewhat closer related to KW than to KN (cf. chart I and section 2.3.3). This agrees with the historical tradition of the coastal Asmat according to which the ancestors of the KW and KP speakers came down the Sirec River in one canoe. The popular expression is: *we are* **ci cowak somot** *(canoe-one-people), people of one canoe.* The percentage shared with Sokoni (chart V, p. 12) is perhaps a bit inflated by mutual contacts between speakers of SO and KP. My impression is that SO is about equally closely related to the other dialects and does not form a subgroup with any of them.

The only phonological feature diagnostic of KP is that KP /t/ corresponds to KW /c/ and /t/, and to KN, SO /t/ and /r/ (isogloss 8). On the grammatical level lack of anteriority forms is perhaps diagnostic for KP (cf. 3.2; isogloss 9).

[28]But see the postscript (p. 122), point 5.

With SO, KP shares the possibility that ü and ö are separate phonemes (cf. 3.1.2.2). If this can be established it will set them off from both the KW and KN dialects.

3.3.3. The Keenok dialect

Keenok is the dialect of the Yopmagau group (Van Amelsvoort 1964:193) and is reported to be spoken by about 6200 people living in seven villages:

35. Komor
36. Yipaer
37. Sawa-Erma
38. Mu-Akani
39. Manep
40. Monu
41. Temor

All but the last village, Temor, are represented in the data on hand. Monu and Mu-Akani are represented by only a few words.

KN is the only dialect which features word-final consonant clusters (isogloss 10). Historically these came about by the loss of ultimate and penultimate vowels when the last consonant was /n/ and the preceding one /t/, /p/, or /m/, resulting in the clusters /tn/, /pn/, /mn/.

There are two other features which set off KN from at least the neighbouring KW and KP dialects. Both concern KN /r/. The first is found only in Komor, Yipaer, and Sawa-Erma. Here we find that in many words /r/ corresponds to KW, KP /r/. Corresponding words in Manep and Mu-Akani lack /r/. If we label /r/ in these cases r_1, then we can say that KN is divided into two subdialects, KN_1 and KN_2 characterised by presence or absence of r_1 (isogloss 12). The position of Monu and Temor in this respect is not known to me, but I think it likely that they belong to KN_2. The second feature is found in all of KN: in many words KN /r/ corresponds to KW /c/ or /t/ (isogloss 11). These cases of /r/ I have labelled r_2. As we shall see in chapter 7, r_1 and r_2 have different origins.

It appears that word-final consonant clusters occur less frequently in KN_2 than in KN_1. In the former subdialect the penultimate vowel has sometimes not been lost in words which have lost it in KN_1. Thus to KN_1 **metn** *armband* corresponds KN_2 **meren**; KN_1 **wetn** *spear* is KN_2 **waren** (for the t : r correspondence in these cases see section 7.4.5).

The lack of data hampers the establishment of lexical isoglosses. The only word so far which seems to be restricted to the KN dialect is 35 poro, 36, 37 pero, 39 paa *chest*.

In the north KN borders on North Asmat. An interesting fact is that although lexicostatistically a language border runs between KN and NA, the two share their main phonological characteristics. I shall return to this point in chapter 4.

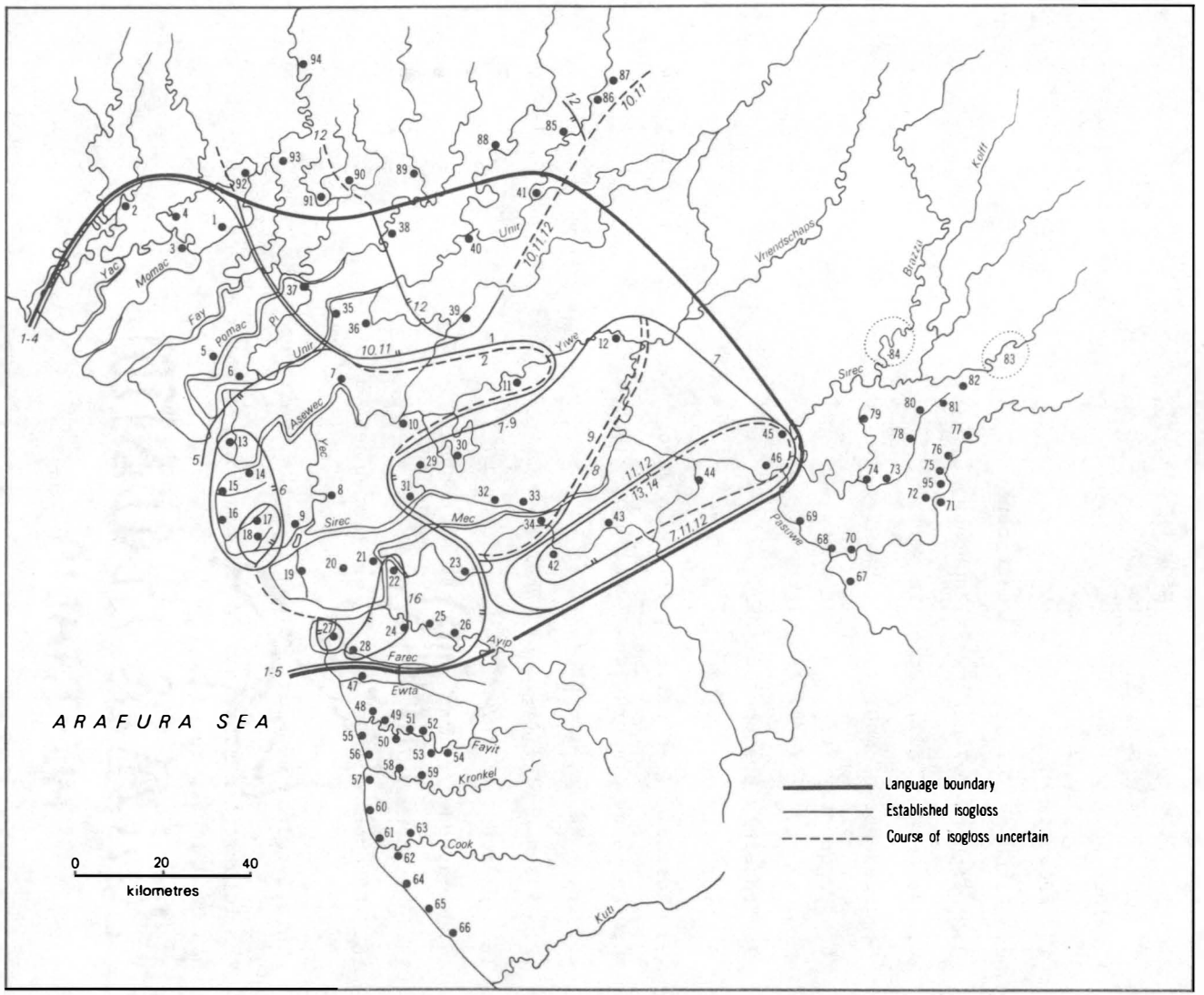
3.3.4. The Sokoni dialect

The linguistic data collected in Mine (42) and Sokoni (43) on the upper As River show that in these villages a separate dialect of CA is spoken. The Sokoni people claim that their dialect is the same as the one spoken in Wakanu (44). No data have been collected in Wakanu, but according to Eyde (1967:80) this village was formerly also situated on the As River, downstream of Mine. The information given by the Sokoni people most probably is correct. The short word lists collected in Yinak (45) and Wooi (46) by Van Arsdale (1974) show that the SO dialect is spoken in these villages as well. Van Arsdale reports that the language of Yinak is very difficult to understand for the coastal Asmat but that communication is still possible (1974:13). This is not surprising since as we shall see later SO has undergone sound changes which sometimes have drastically altered the shape of its words.

What makes SO interesting is that it shares its two most important phonological characteristics with KN_2. That is, it has an r_2 corresponding to KW /c/ or /t/, and KP /t/, and lacks an r_1 corresponding to KW, KP /r/ (isoglosses 11, 12). This suggests that in the past speakers of SO and of KN_2 formed one group or at least were in close contact with each other. However, the cognation percentages of chart V do not show a closer link between SO and KN than between SO and the other dialects. Also the fact that SO and KN have developed phonological features of their own, viz. the word-final consonant clusters in KN and the /h/ phoneme in SO, shows that their separation cannot be of recent date.

Three other features, the presence of /h/ (isogloss 13), [ð] and [dð] as allophones of /y/ (isogloss 14) and the possible presence of /ü/ and /ö/ (isogloss 7) appear only in recordings made in Mine and Sokoni. Whether they are characteristic of SO as a whole can only be ascertained after more data have come to hand.

MAP IV ISOGLOSSES IN THE CA AREA



Legend to Map IV

Isogloss No.		Defining feature of:
1.	Presence of /c/	KW
2.	Diaphone /w/ lacks [v] allophone	KW
3.	Diaphone /y/ has two allophones, [j, j]	KW
4.	Absence of dual number in verbs	KW
5.	Presence of medial and final /w/	Ka [1]
6.	Frequently /u/ : /o/ elsewhere, /e/ : /a/ elsewhere	Mm
7.	Possibly presence of /ü/, /ö/	KP/SO
8.	/t/ : KW /c, t/, KN, SO /t, r/	KP
9.	Absence of anteriority forms in verbs	KP (SO?)
10.	Presence of word-final consonant clusters	KN
11.	r_2 : KW /c, t/, KP /t/	KN, SO
12.	Absence of r_1 (r_1 : KW, KP /r/)	KN_2, SO
13.	Presence of /h/	SO
14.	Diaphone /y/ has [ð,dð] as allophones	SO
15.	Diaphone /m/ is always [m]	-
16.	Diaphone /s/ has [s̬, θ] as allophones	-

[1] This isogloss sets off Kainak from the remainder of KW.

The information contained in the postscript, point 5, 2nd paragraph, has been incorporated in the map.

4. NORTH ASMAT

4.1. General

The interior to the north of CA is still largely unexplored territory. The population of the area consists largely of small bands of semi-nomadic people moving over wide areas from one temporary settlement to another. They keep away from the main waterways and are therefore seldom seen. Part of the population has settled in more permanent villages and these have been contacted by the Government and Mission. But even now they are only on a fringe-contact level (Trenkenschuh 1970:19). These villages are:

85.	Sagapo	90.	Pupis
86.	Ti	91.	Weyo
87.	Yenesoko	92.	Emo-Espeno
88.	Awemu	93.	Irogo
89.	Momogo	94.	Yakapis

There is, and was in the past, regular contact between the southernmost NA villages and their Keenok neighbours. At least in Momogo and Pupis there are people who know some Keenok. Trenkenschuh (1970:19) reports of Sagopo that its language is 'different from but still, with difficulty, understood by Keenok speakers'. Since formerly Sagopo and Momogo formed one village some knowledge of KN can be assumed to be present in Sagopo as well. It is likely that the Sagopo people use this knowledge in their contacts with KN speakers so that Trenkenschuh's observation cannot be taken at face value as an assessment of the intelligibility of NA to KN speakers.

There must be a considerable number of semi-nomadic bands of people in the area. Van Dongen (1970:26) reports fifteen names of such groups obtained from informants of Monu and Mu-Akani. They are: Weagu[29], Amson, Etogo, Wegu, Tiraman, Keke, Itmo, and Yerepmo on the Unir River; Amamu and Evesayi on the Veyo River, and Tomu, Teiyen, Yur, Epin, Yurak, on the Pomac River. From people of Manep he obtained eleven names: Biro, Keiri, Fagan, Anipit, Bor, Yuno, Ofin, Bener, Tames-Sogoni, Yoigin, and Beag (1970:25). Van der Schoot (1969:14) mentions the following groups and their locations: the Nafarepi on the Akimuga River; the Warowe and Waituku on the Cemara River; the Owapu on the upper Owap (Oost Kasteel) River; the Epame and Itamwe on the

[29] I have changed only the typically Dutch features of Van Dongen's spelling of the names: oe, ie, and j have been changed into u, i, and y respectively.

Pocakap (Kleine Bloemen) River; the Etoko[30] on the Poc (Bloemen) River. The name Nafarepi or Navaripi has become current as a common name for all the people inhabiting the interior between the Asmat and Sempan language areas.

4.2. The Data

Only in Momogo, Pupis, Irogo, and Ti have word lists been collected. In chapter 2 I have shown that lexicostatistically the Momogo, Pupis, and Irogo lists seem to represent one language which is separate from but closely related to Central Asmat, Citak Asmat, and Casuarina Coast Asmat. If however Trenkenschuh's remark on the intelligibility of NA to speakers of KN is right, this would point to NA being a dialect of CA rather than a separate language.

The Ti list is too short to be amenable to a lexicostatistical analysis, but further inspection shows that it is sufficiently similar to the other three lists to be included in NA. The four lists share a number of phonological and lexical features which distinguish them from the other Asmat languages. On the other hand they also share some phonological features with the KN and SO dialects of Central Asmat. I shall discuss these features on the basis of the comparative list given below. The originally phonetic spelling of the native words in the list has been simplified by omitting most of the diacritics. The NA data have not yet been phonemicised; my impression is that the sound system of NA is identical to the KN system with the exception that [r] possibly is an allophone of /t/ and not a separate phoneme [cf. 7.4.5.). In the last column of the list are given: a) One or two corresponding words in CA, if any; where possible they have been taken from the KW dialect. b) The list number of the item in the list of Proto-Asmat reconstructions (chapter 8.3) where all the data are presented.

[30]Names like Etoko, Waituku, Owapu, Itamwe, Warowe all contain a morpheme meaning *people*: o, u, we, owe. The Etoko mentioned by Van der Schoot could be the same group as the Etogo mentioned by Van Dongen.

		Momogo	Pupis	Irogo	Ti	CA	
1	armpit	yimap	yümap	yimabe	dzimap	yamepi	16
2	belly	teak	-	tiake	tek	-	34
3	calf of leg	zim^{w}i	yimae ndasa	yima ndesa	-	-	59
4	chest	wɔni	wane	ɔne	-	-	74
5	goura pigeon	yufu	yuf	-	-	yo	173
6	mouth	^{m}baf	^{m}bafa	^{m}bwafa	-	ma, me	244
7	navel	bebe	bebe	bebere	beper	-	251
8	neck	ziriri	yirara	-	yirit	-	252
9	pig	ofo	ofo	-	-	o, wo	280
10	tongue	emane	emane	ɔmane	emene	komen	383
11	vein	fimabi	-	-	fimibir	fim	399
12	ashes	zimre	yimare	-	-	yowmic	21
13	buttocks	-	fam^{w}a	fwemore	famɔr	famor	58
14	dog	yui	yuye	yuuro	dzuur	yuwur	108
15	fish weir	fee	fe	fere	-	fer	142
16	nail of finger	firi	fire	fire	fit	fic	248
17	skin	pitn	pitn	pitn	pitn	picin	336

Items 1-11 all in one way or another distinguish NA from CA, CI, and CC:

1 has cognates in CA and CC but only the NA lists show forms with a high front vowel following the word-initial consonant;

2 has cognates in CC only and these lack /k/: tia, tie;

3, 4, 7 do not seem to have cognates in CA, CI or CC;

5, 6, 9 have cognates in CA, CI, and CC; all of these lack /f/;

8 has cognates in CC and CI. Thses have /t/ corresponding to NA r, or t, see below.

10 has possible cognates in CA and CI, all having initial /k/.

However, if we compare NA with the Sempan language in the west we find that several Sempan cognates are formally quite similar or even identical to their NA counterparts. Thus in Sempan, 2: **teake**, 5: **ifo**, 7: **mepere**, 9: **ofo**, 10: **omane**, 11: **fumapi**. It appears that lexically NA assumes an intermediate position between the Asmat languages and Sempan.

Earlier (3.3.3, 3.3.4) we have seen that SO and KN r_2 corresponds to KW **/c/** and **/t/**, KP **/t/**. The same holds for Momogo, Pupis, and Irogo **r**, and for intervocalic **r** in Ti as is shown by items 12, 16, and 8. The evidence of 8 is indirect: both CC and CI have the form **ititi**, and in these languages **/t/** corresponds to CA **/t/** or **/c/**.

The Ti list differs from the other NA lists in that it has a few cases of word-final **t** corresponding to **r** in the other lists (in the sample above: 8, 16). It is possible that a change from **t** > **r** was prevented in Ti by an earlier loss of the final vowel (cf. 7.4.5). As is evident from the above sample, Ti has lost a final vowel in many words.

The Momogo and Pupis lists further have a feature in common with KN_2 and SO: the absence of r_1 (items 7, 11, 13, 14, 15 in the sample).

Finally, all four lists share with KN the presence of word-final consonant clusters (17).

The paucity of data allows us to trace only parts of the isoglosses representing these features (isoglosses 10, 11, 12 on map IV). Between Sagopo (85) and Ti (86) the isogloss no. 12 can be drawn with some certainty since Sagopo once formed part of Momogo and can be expected to represent the Momogo variety of NA.

4.3. Summary

So far, the following facts have emerged about NA:

Lexicostatistically it seems to be a separate language closely related to CA, CI, and CC.

Intelligibility for KN speakers if indeed present as reported suggests that NA is a dialect of CA.

Phonologically there seems to be no break between NA and the KN dialect of CA unless NA **r** can be interpreted as an allophone of **/t/**.

Lexically, NA often is more similar to Sempan than to any of the other Asmat languages.

It is possible that Sempan and Central Asmat are connected by a dialect chain, only partly represented in the now available data. I shall accept here the lexicostatistical result and classify NA as a separate language pending the outcome of further research.

5. CITAK ASMAT

5.1. General

Citak Asmat (CI) is spoken by about 4900 people living in the area directly east of the confluence of the Sirec and Pasuwe Rivers. In the east and south CI borders on languages of the Awyu-Dumut Family. Culturally the Citak people appear to have been influenced more by the inhabitants of the highlands in the north than by their Asmat neighbours (Van Arsdale 1974:30). They contrast with the coastal Asmat by having a rudimentary swidden horticulture and a relative non-reliance upon sago (Van Arsdale 1975:19). The Government census of 1967 lists twenty-nine villages but only seventeen of these could be identified with villages on Drabbe's dialect map (Drabbe 1963), leaving fourteen village names on the map unmatched with names mentioned in the census list.

The list below contains the twenty-nine village names of the Government census list. Only those villages whose location could be ascertained with the help of Drabbe's map have been numbered and are shown on maps III-V.

Citak Villages

Location known:		Location not known:
67	Senggo	Sumasma
68	Tamanim[31]	Wowi[31]
69	Epem	Daiwar
70	Abao	Agauw
71	Fasera	Tomauw
72	Tiurubis	Tayao
73	Vabak	Ver
74	Wautu	Somnak
75	Tiau	Bina

[31]See the postscript (p. 123), point 6.

Location known:		Location not known:
76	Binerbis	Bidneo
77	Vau	Amer
78	Zuanakup	Dianem
79	Birako	
80	Togomau	
81	Wagis	
82	Ziobok	
95	Ekau	

Almost all the CI language data available to me have been collected in the dialect of Senggo. In this village both the Roman Catholic and Protestant Missions have established posts[32]. The only information on other dialects in the region comes from M. Bromley (1975) who states that in Tiau (where the ZGK[33] has established a mission post) 'a somewhat different but mutually intelligible dialect is spoken'. The short lists collected on the upper Sirec and the Brazza Rivers (nos. 83 and 84, map III) also seem to represent dialects of Citak Asmat (Van Arsdale 1975:18).

There are several reports on the intelligibility of CI to speakers of Central Asmat. Those of the nearby villages Wooy and Yinak (SO dialect of CA) say that they 'understand little of the Citak dialect' (Van Arsdale 1974:32). They are 'able to understand isolated words but not able to conduct a normal conversation' (Van Arsdale 1975:18). The coastal Asmat (KW speakers) 'find the Citak dialect to be largely unintelligible' (Van Arsdale 1974:19). Citak speakers find that past the first Asmat (SO?) villages they cannot communicate very well (Bromley, personal communication).

These reports seem to lend support to the lexicostatistical classification of CI as a separate language. Further support can be found when we look at the phonological data. We shall see below that a whole bundle of phonological isoglosses runs between CI and CA.

[32]That is, the Sacred Heart Mission and the Evangelical Alliance Mission.

[33]The Dutch Mission of Reformed Churches (Zending Gereformeerde Kerken).

5.2. Phonology

We are fortunate to have for Citak Asmat a tentative phonological analysis from an authoritative source: M. Bromley's reports on a suggested Citak orthography (1973, 1975). His analysis, although by no means final, shows that the Citak phonemic system is richer than that of any of the other Asmat languages. The following outline is based on Bromley's reports.

The phoneme inventory tentatively set up by Bromley counts 16 consonants, 7 vowels, and 3 tonemes. The consonants and vowels together with their main allophones have been set out in chart VIII.

There still are several areas of uncertainty in the analysis. The phonemic status of /b/ and /d/ is clear only in word-initial position, and even there the number of cases of contrast with /p, m/ and /t, n/ respectively is very low. Word-medially, [b] and [d] seem to be allophones of /p/ and /t/ respectively[34]. Other contrasts which have not been established with certainty are: /f/ : /v/ in medial position and /z/ : /y/ in initial position. The /g/ phoneme seems to be a loan phoneme at least in the Senggo dialect.

If only bi-syllabic words are taken into account, the prosodic phenomena can be described as contrastive stress. However, on mono-syllabic words Bromley found three contrastive pitch patterns: 1. short low or downglide; 2. short and high; 3. long upgliding high. The three tone patterns are more clearly recognisable in the Tiau dialect than in the Senggo dialect, Bromley observed. In the latter the contrast between 1. and 2. is no longer recognised by part of the speakers, many of whom maintain the contrast between the first two versus the third in terms of syllable length. Others also have the contrast between patterns 1 and 2 realised as pitch contrast in Tiau and by some Senggo speakers, but for these others the contrast is realised as a matter of the ballistic character of the syllables, syllables with surging onset contrasting with syllables with sharp, ballistic onset[35]. A similar system including some evidence of tonal contrasts, where much of the system could be described as exhibiting stress contrasts, may perhaps also be found in the KW dialect of CA (cf. 3.1.2.3).

[34] Bromley, while acknowledging that there are problems keeping /p/ and /b/ apart in this position still considers [b] here an allophone of /b/. In my opinion there are strong grounds for considering intervocalic [b] an allophone of /p/.

[35] Bromley, personal communication.

CHART VIII: Citak Phonemes and Their Main Allophones

Phoneme	Allophones: word-initially	medially	finially
p	p	p, b, ɓ[1]	p, ɓ[2]
b	b, ^{m}b[3]	(b, ɓ)[1]	-
m	m	m, M[8]	m
f	f	f	-
v	v	(v)[4]	-
w	w	w	w
ẍ	ẍ	ẍ	ẍ
t	t	t, d[1]	t, d[2]
d	d, ^{n}d[3]	(d)	-
n	n	n	n
s	s	s	s
z	z, ž, ^{d}z, ^{d}ž[5]	z, ž[5]	-
y	(y)[4]	y	y
r	-	ř, l, ļ	ř
k	k	k, g̈[1]	k, g̈[2]
g	(g)[6]	(g)[6]	-

	open syllables	closed syllables
i	i	ɪ
ü	ü	ü
u	u, ʊ[7]	u, ʊ[7]
e	e	ɛ
ö	ö	ä
o	o	ɔ
a	a, ɑ	ʌ

1. At least in some words alternating intervocalically.
2. The voiced fricative occurs only when followed, within the same phonological phrase, by an initial vowel.
3. Only one out of several informants prenasalised the voiced stops.
4. Not well attested in this position.
5. Freely alternating allophones, but dz and dž appear especially before high front vowels.
6. Only a very few examples were recorded in the Senggo dialect, and then only in words borrowed from another dialect.
7. The fronted allophone appears only after /s/ and /z/.
8. Voiceless /m/ is found only in the cluster /fm/.

Citak Asmat, like Central Asmat, allows only word-medial consonant clusters but unlike CA it allows clusters of three consonants in polymorphemic words. They always have a syllabic nasal as the second consonant, e.g. [tapmapm:de] *I planted some*. Bromley suggests that the nasal in such clusters could be analysed as a sequence of /u/ + /m/ or /n/. This would bring CI word structure into line with the other Asmat languages who do not allow sequences of more than two consonant phonemes (cf. 3.1.1).

It appears then that there are at least five important phonological isoglosses separating CI from CA: those representing /b/, /d/, /g/, /z/, and /ɣ̈/. The presence of such a bundle of isoglosses between CI and CA lends support to the result of the lexicostatistical analysis. Three other phonemes, /v/, /ü/, and /ö/ possibly occur in the KP and SO dialects of CA as well (cf. 3.1.2.2, 3.3.2, 3.3.4); the isoglosses representing them therefore may run across the CA - CI language border and at least for the present cannot be used to set off CI from CA.

6. CASUARINA COAST ASMAT

6.1. General

Casuarina Coast Asmat (CC) is spoken in a narrow coastal strip between the Ewta and Kuti Rivers. In the north this strip is about twenty kilometres wide but it tapers off towards the south and between the Cook and Kuti Rivers all CC villages are situated on the sea shore. in the north CC borders on Central Asmat, in the east its neighbours are Sawuy, one of the languages of the Awyu-Dumut Family, and two languages of the Kayaghar Family: Kaugat and Kaigir. There are about

8600 speakers of CC. They live in twenty villages listed here roughly in north to south order:

47.	Otenep	58.	Simsakar
48.	Masim	59.	Sinakat
49.	Muepis		
50.	Nanew	60.	Kayerin
51.	Piramat	61.	Pirimapun
52.	Maus	62.	Aorket
53.	Manair	63.	Saman
54.	Taworo	64.	Emine
55.	Maintamor	65.	Tareo
56.	Nertamor	66.	Semenoro
57.	Mayun		

The Casuarina Coast Asmat distinguish amongst themselves two regional groups, the Matia and the Sapan. The Matia number about 5200 living in thirteen villages (nos. 47-59); the Sapan count about 3200 and live in seven villages (nos. 60-66)[36]. As far as can be judged from the meagre lexical data in hand these groups speak slightly different dialects, as may appear from the short list below:

	Matia	Sapan
cassowary	piru	puru
afraid	sone	son
crocodile	ö	ee
leaf	ye	ee
nail of finger	fiki	fiti
thatch	one	wene
tree	ose	wese

To date the only report on mutual intelligibility of CC and other Asmat languages is from Bromley: working with both CC and CA speakers at a translators course, he found that they 'reacted as if they were dealing with different languages, with some, but limited, mutual intelligibility (Bromley, personal communication).

6.2. Phonology and Lexicon

The CC lists contain practically no grammatical information but since most of them have been recorded on tape they at least allow an

[36] According to the Asmat census of cultural groups quoted in Van Amelsvoort 1964:192.

impressionistic account of the phonemic system. It looks as if CC has ten consonant phonemes and seven vowels: p, t, k, m, n, f, s, w, y, r; i, ü, e, o, a, ö, u. The language has quite distinctive pitch patterns - my Yepem informants never failed to emphasise those when they imitated the CC speakers - but whether they represent intonational or tonal features, or both, is as yet impossible to say.

So far the most interesting part of CC seems to be its lexicon. Firstly, more than in CA or CI one finds in CC unexpected sound correspondences. Thus instead of the expected regular forms sako *bird* and fiti *nail* we find sato and, in Matia, fiki. Secondly, several CC words contain a final consonant (t) or a final syllable (to, ke, kot) which does not appear in the corresponding words in CA and CI and only occasionally in the cognates in the other languages of the family. Thus:

pronged arrow CC apato; CA apan, apene; SE[37] apate; KA apoko[38]
mouse CC pereto; CA per, pero, piro; CI pirao
bag CC esake; CA, CI, NA ese, esa; IR eseka[39]
skinny CC fatokot; CA faco, fato, foro; CI fato
unripe CC ofokot; CA ofo.
cold CC yufuto; CA yufo, yufu; NA yufur; SE ifa-ko[40]
dumb CC okorot; CA okor
dry CC sosot; CA soso; CI sösö; IR sosota
sharp CC farot; CA fero, faro; CI faro; SE fero-ko[40]
slippery CC yutut; CA yico, yuto, yuru; CI yuru; SE ititi-ko[40]

It is possible that we have here the remanants of an old class marking system. Some evidence that -t, -to, -ne, -ke and perhaps -kot

[37]For the other members of the Asmat-Kamoro Family I have used the following abbreviations: SE = Sempan, KA = Kamoro, IR = Iria-Asienara. A few times I have found reason to use data of Mombum (MO) as well.

[38]KA k : SE, CC, CI, CA, NA t is a regular correspondence. SE apate means *split*, KA apoko = *pronged spear*.

[39]Compare the case of CC tia, tie *belly* mentioned above, chapter 4, p. 29. In this word CC seems to have lost the final syllable still present in NA and SE (tiake, teake).

[40]SE -ko appears with many adjectives and probably has the same function as KA -ko and the CA (KW) particle ko(r) that is, of indicating a high degree of a quality. Thus KW awut ko *very big*; KA toto-ko *very dry*. This -ko as far as I can see has nothing to do with the -t, -to, -kot found in the CC words listed here.

are petrified suffixes can be found when comparing the Asmat languages with other members of the family, especially Iria-Asienara (cf. chapter 8, nos. 11,20,25,34,39,56,79,109,122,128,217,221,243,252, 323,337,340,344,359,395). The investigation of this possibility however falls outside the scope of the present paper.

CC has further retained several lexical items which have been lost and replaced by new forms in CA and CI but which have been preserved in at least one of the other languages of the family:

afraid CC son, sen, sone; SE honae; KA tono
bamboo CC isim, yisim; SE ihimi
banana CC tayi, tai, teyi; KA kau (?)
cockatoo CC tur, turu; SE tiiro; IR ature
tail CC mepe; NA mep, mepe; SE mepe, KA mipi
hungry CC yor; the only possible cognate of this word is found in Mombum (MO): or

Fuller data can be found in the list of reconstructions, chapter 8, nos. 3, 27, 29, 77, 192, 364.

Lexically therefore CI has a distinctly 'archaic' character which may be a sign that the Casuarina Coast Asmat have lived in relative isolation from their Asmat neighbours for a long time. This agrees with the fact that they have developed (or preserved) a number of striking cultural peculiarities, such as the custom of keeping the skulls of deceased relatives, the carving of large crocodile-like figures used during initiation ceremonies, and the general absence of permanent ceremonial houses. Cultural influence of CA is only noticeable in the three northern villages of Otenep, Masim, and Muepis (Trenkenschuh 1970, Van Kessel 1961).

7. PROTO-ASMAT PHONOLOGY

By comparing the phonological data in CA, NA, CI, and CC it is possible to reconstruct with some confidence the main features of the phonology of their ancestor language, Proto-Asmat (*PA). These features and the changes that took place in them during the development of the daughter languages form the subject matter of this chapter. Word structure, stress and tone, and segmental phonemes will be dealt with in this order.

7.1. Word Structure

Proto-Asmat appears to have had a simple word structure. At least in monomorphemic words it lacked consonant clusters. If such clusters

occurred at all they must have consisted of a morpheme-final consonant followed by a morpheme-initial consonant. Geminate consonant clusters certainly did not occur. The only consonants allowed in word-final position were /y/ and /w/. In monomorphemic words sequences of no more than two vowels could occur. In other words, *PA was in its word structure very similar to the present-day Sempan and Kamoro languages[41].

It is possible that in *PA the requirement of a vocalic or semi-vocalic word-end was already weakened. I found about 70 cases out of 350 in which the data do not allow the reconstruction of a word-final vowel, but this number may be reduced when more data come to hand. It is certain that in the daughter languages this rule no longer applies and that often word-final vowels have been dropped. The tendency to lose final vowels has been stronger in CA than in the other Asmat languages, and within CA it has been strongest in the KW dialect which has lost the final vowel in many originally polysyllabic words. The loss of final vowels is amply illustrated by the examples given in section 7.4 and by the data in 8.3.

7.2. Stress and Tone

Pitch phenomena and stress have only been studied to some extent in the KW dialect of CA and in CI, and there is therefore only a narrow factual basis for conclusions regarding these phenomena in *PA. Given the similarities between CI and KW in these respects (cf. 3.1.2.3, chapter 5, p. 34) it seems possible that a system like that of CI was operative in *PA. That is, phonemic stress in polysyllabic words and a tonal system restricted to monosyllabic words.

7.3. Consonants and Vowels

*PA probably had eleven consonant phonemes and five vowel phonemes:

p	t	k	i	u
m	n		e	o
f	s		a	
w	y			
	r			

[41] In Sempan and Kamoro, consonant clusters occur only word-medially and always across an actual or old morpheme boundary. In Sempan all words end in a vowel, /y/ or /w/; in Kamoro this is also the case except it seems in a few verb forms ending in /m/ (see Drabbe 1953:21-23).

Their phonetic values must have been similar to those of the corresponding CA phonemes (cf. 3.1.2.1). *t probably had a palatalised allophone when adjacent to *i; *i and *e had rounded allophones when preceding *w; *u and *o had fronted allophones when preceded and followed by non-nasal alveolar consonants; *p and *m may have had labialised allophones ([p^w, m^w]) when followed by a front vowel. All consonants were allowed in word-medial position and all but *r in word-initial position. Word-finally probably no other consonants than *y and *w could occur (cf. 7.1).

7.4. Consonant changes

7.4.1. *p, *k

The only *PA consonants that did not change in any respect during the development of the four Asmat languages - except perhaps for minor shifts in allophonic realisation - were *p and *k, as illustrated below[42]:

*p

	CA	NA	CI	CC	*PA	
KW	picin					
KP	pitin	pitn	pitin	pitin	*piTini[43]	*skin*
KN	pitni					
SO	pirin					
KW	yipic	ipir	ipit	ipit	*yipiTi	*man*
KP	yipit					
KN,SO	yipir					
KW	yimsip	yisipene	imisep	yimsepin	*yimasapi(ne)	*doorway*
KP	yimasap					
KN	yumsep					
KN	yinsup					

[42]Unless stated otherwise the samples have been taken from the following lists: CA: Suru (for KW), Namen (for KP), Sawa-Erma (for KN or KN_1), Manep (for KN_2), Sokoni (for SO); NA: Momogo; CI: Senggo; CC: Pirimapun. Bracketed forms are non-cognates; a dash indicates absence of the corresponding form in the data. When all CA dialects have the same form it is listed only once and not preceded by dialect identification (see 7.4.2 wasen).

[43]For the full evidence on which the reconstructions are based see 8.3.

k*

	CA	NA	CI	CC	*PA	
KW,KP,SO KN	komen komne	(emene)	koman	koman	*komane	*tongue*
KW,SO KP,KN	okon okone	wakane	okon	(topane)	*wokone	*jaw*
KW,KP KN,SO	manmak mamnak	manak	manak	manak	*mana-maka	*eye*

7.4.2. *s

*s did not change except in the SO dialect of CA where part of its allophonic content seems to have merged with a newly developed phoneme /h/ (cf. 3.1.2.2.). Thus when *s was preceded and followed by *a it developed in SO an allophone [h] which emerged with a [h] of different origin (see 7.4.3).

	CA	NA	CI	CC	*PA	
KW,KN,SO KP	sis sisi	sise	sisi	sis	*sisi	*tooth*
	wasen	-	-	wasene	*wasane	*forest*

But: SO naham, KW nasam *to eat up*
SO komaham, KW komasam *to break off*

7.4.3 *f

*f was generally preserved unchanged in all daughter languages but there is evidence that it was dropped in CA, CI, and CC when it occurred between like vowels. In the SO dialect of CA however *f was weakened to [h] when the two vowels were *a. The result could have been that the opposition between /s/ and /h/ was neutralised in this particular environment, but there are a few instances of intervocalic [h] in the SO data which cannot be traced back to an earlier *s and *f and for that reason I have provisionally set up /h/ to account for all instances of [h].

In NA, for reasons which are still obscure, *f between like vowels was preserved in some words and dropped in others.

	CA	NA	CI	CC	*PA	
KW,SO	fin	ifine[44]	fini	fini	*fina	*hair*
KP	fina					
KN	fini					
KW	yufo	yufur	zufu	yufut	*yufo-[45]	*cold*
KP	yife					
KN	yufok					
SO	yifo					
KW	yen	yane	zan	yane	*yafane	*ear*
KP,KN	yane					
SO	yahan					
KW,KP,KN	man	mafane[46]	ban	mane	*mafane	*hand*
SO	mahan					
KW	o	ofo	uu	wo	*ofo	*pig*
KP,KN	wo					
SO	oo					
KW,KN	yo	yufu	-	yoa	*yofo	*goura-pigeon*
KP	yu					

Further evidence for intervocalic *f in *hand, ear, goura pigeon* and *pig* can be found in the other languages of the family, cf. section 8.2 nos. 11, 115, 173, 280.

7.4.4. *r

*r was preserved in all Asmat languages except in the SO dialect, in KN_2, and in at least two NA villages, Pupis and Momogo: in all of these *r was lost. The loss of *r must have preceded the change of *t to /r/, see 7.4.5 below.

It is likely that the loss of *r spread from one centre over part of the NA and KN areas, and the fact that *r was lost in SO as well is one of the arguments in favour of a common local origin of the SO and KN_2 dialects of CA, cf. 3.3.4.

[44] ifine means *hair of head* and is an old compound i-fine, see section 8.2, no. 178.

[45] The final consonant in the NA and CC forms possibly is a remnant of an old suffix, cf. chapter 6, page 2. The final k in KN probably is a remnant of the particle ko, cf. footnote 40.

[46] mafane occurs in the Irogo list; Momogo has mane.

	CA	NA	CI	CC	*PA	
KW	erem		(zütam)[47]	yirima	*yirama	*night*
KP,KN_1	yiram					
KN_2	yiam					
SO	yam					
KW	yuwur	yuuro[48]	zuur	yuuri	*yuwuri	*dog*
KP,KN_1	yuri	yui				
KN_2	yuu					
SO	yo					
KW,KP	famor	femore[48]	-	femoro	*fae-more	*buttocks*
KN_1	famer	fama				
KN_2	fame					
SO	-					

7.4.5. *t

The hypothesis put forward here is that *t was preserved in CI, CC, and in the KP dialect of CA, but split into two phonemes /t/ and /c/ in KW, and into /t/ and /r/ in KN, SO and perhaps also in NA.

*t→t,c: Proto-Asmat *t probably had a palatalised allophone when preceding a high front vowel - as CA /t/ still has in the KN dialect - and non-palatalised allophones in all other environments. I assume that the originally complementary distribution became obscured without the palatalised allophone loosing its palatalisation by such factors as morphophonemic change, analogic change and a tendency towards vowel harmony. As yet it is impossible to establish in any particular case how the change from *t to /c/ came about. The hypothesis rests upon the fact that KW /c/ is found next to /i/ much more frequently than /t/[49]. In a number of cases such an environment, although absent in KW, can be reconstructed for *PA. On the other hand there is a considerable number of words in KW in which /c/ appears in a non-high front vowel environment and where comparison with other dialects or

[47] zütam is an old compound. The first constituent, züt corresponds to KW yiwic *dark*; the second constituent, tam or am, I have not been able to identify. For a guess as to its etymology see 8.2, no. 97.

[48] The first form is from the Irogo list, the second from the Momogo list.

[49] A Suru list of 158 items all containing /c/ counted 59 words in which /c/ is next to /i/; a list of 135 items containing /t/ counted only 26 cases of /t/ next to /i/. Out of 60 sets of correspondences involving KW /c/, 31 have /c/ next to /i/ either in the KW words or in the reconstructable *PA words, but only 11 out of 50 sets of correspondences involving KW /t/ have /t/ next to /i/ and only in one case it seems that an adjacent *i can be reconstructed for the *PA form.

languages does not point to the loss or change of an earlier adjacent *i. Mechanically reconstructing an *i in those cases creates the problem how to account for the fact that *i was lost everywhere without leaving a trace except in KW. I have therefore written *T in the reconstructions wherever KW has /c/ in recognition of the fact that while probably /c/ developed from *t, the conditions under which this development took place are largely unknown[50].

	CA	NA	CI	CC	*PA	
KW	cem	teme	tame	tam	*Tame	*house*
KP	tame					
KN,SO	teme					
KW,KP,KN	te	-	te	tee	*te(e)	*rain*
KW	picin	pitn	pitin	pitin	*piTini	*skin*
KP	pitin					
KN	pitni					
SO	pirin					
KW	atakam	-	atakom	(atam)	*atakom	*language*
KP	atokom					
KN,SO	arakam					
KW	yipic	ipir	ipit	ipit	*yipiTi	*man*
KP	yipit					
KN,SO	yipir					

*t→t,r: The conditions governing the split of *t into /t/ and /r/ are interesting because of their implications for the theory of the development of the polymorphemic verb stems in the Asmat languages. In KN, SO, and NA *t changed to r except in the following cases:

a) In word-initial position, as already illustrated by the first example above.

b) When immediately followed by another consonant. Thus in the third example above *t did not become r in KN and NA because it had become part of a consonant cluster through the loss of the following vowel (cf. 3.3.3).

[50]The presence in CC of a form fiki corresponding to KW fic *finger nail* raises the question whether perhaps *PA *k also had a palatalised allophone which then merged with the palatalised *t to form /c/ in KW. This would account for the fact that in KW /k/ is seldom found next to a high front vowel. The answer cannot be found without drawing the Sempan, Kamoro, and Iria languages into the comparison, since both Proto-Asmat *t and *k seem to have developed from an earlier **k. Such an enterprise falls outside the scope of this paper.

c) When in initial position in a verb stem morpheme. Thus KW mi-titiw = KN mi-tiru *to put down*; KW ma-tew-pum = SO ma-tö-pum *to take something into the water*; KW mi-mit-tewer[51] = KN_1 mi-miri-teer *to spear and take*. But KW mita *nasal mucus* which from a historical point of view is a compound of mi *nose* and ta *sap*, corresponds to KN mira, SO mire, with morpheme-initial *t changed to r.

The interesting fact is that those morphological units which in the present-day Asmat languages have to be analysed as verb stem morphemes behaved in Proto-Asmat like words in their conditioning of allophones. This implies that what now are verb forms with polymorphemic stems were, in *PA, close-knit verb phrases.

When *t developed an allophone [r] in certain environments, this [r] merged with the already existing /r/ in KN_1 and in the Irogo and Ti varieties of NA. In KN_2, SO, and the Momogo and Pupis varieties of NA which had lost *r, the new r would have remained an allophone of /t/ were it not for the change in structural status of the verb phrases mentioned above which resulted in t and r contrasting in the same (= morpheme-initial) environment. Also other factors must have contributed to the developing of contrast between [t] and [r], at least in SO and KN_2. Thus in KN_2 (Manep) we find piti *skin* instead of piri, probably through reduction of the cluster tn in an earlier form pitni; SO (Mine) has taot *woman* instead of taor.

A few more examples are:

	CA	NA	CI	CC	*PA	
KW,KP	kumit	-	komet	-	*komiti	*soft*
KN	kumiri					
SO	kumir					
KW	meten	metn	-	-	*metan	*armband*
KP	metan					
KN	meren					
KW	ocen	watne	otan	otan	*woTane	*spear*
KP	wotan					
KN	watne					
SO	waren					

[51] I am writing mi-mit-tewer to show the morphemic make-up of the form. Its realisation, according to the rule that no geminate clusters are allowed, is mi'mitewer (with stress on the second vowel).

7.4.6. *m

*m was generally preserved except in CI where it seems to have split into /m/ and /b/ in word-initial position (cf. chapter 5.2, p. 34). Bromley gives only one example of initial /m/ (*eye*, see 7.4.1) and it corresponds to /m/ in the other Asmat languages. Also CI /b/ corresponds to /m/ in the other Asmat languages, see *hand*, 7.4.3, and *tongue* 7.4.1. Other examples are:

	CA	NA	CI	CC	*PA	
KW	mu	mi	bii	mii	*muí	*water*
KP	mui					
KN,SO	mi					
	emak	emake	emak	emak	*emake	*bone*

There are a few exceptions. Two of them, *m > Ø, and *m > n, can be found in *doorway*, 7.4.1.

7.4.7. *n

*n was generally preserved except in CI where it seems to have split into /n/ and /d/ in word-initial position (cf. chapter 5, p. 34). However, the only word with initial /n/ given by Bromley is a tree name and no equivalents have been elicited in the other Asmat languages. CI /d/ regularly corresponds to /n/ in CA, CC and NA.

	CA	NA	CI	CC	*PA	
KW,SO	nes	nese	dasa	nasa	*nasa	*meat*
KP	nasa					
KN	nese					

See also *hair* , 7.4.3.

7.4.8. *y

*y is reconstructable in initial, medial, and final position but is well attested only in word-initial position. This phoneme was often lost in the daughter languages.

Loss of initial *y seems to have been a tendency rather than the rule and in almost all cases noted has occurred when the following vowel was /i/. Thus some KW lists have yisin *coconut* and others have isin; KW has yir *white cockatoo* but KN has iir; KW has yis and is *firewood*, CC yisa and isa, CI isa. See also the following items in 8.3: *doorway* (109), *fire* (135), *knee* (208), *long* (226), *man* (232), *two* (393).

Bromley (1973) writes /z/ for the reflex of initial *y in CI and posits contrast with /y/. CI /y/ however is found only rarely in

this position and Bromley's only example, yapi *wood species* he later analysed as iapi. Since my data do not contain cognates of iapi in the other Asmat languages it is unknown which phoneme in these languages would correspond to CI initial /y/.

Non-initial *y was generally lost in the Kainak subdialect of KW, in KN, SO, and perhaps also in NA. It was generally preserved in the remainder of CA and, so it seems, also in CI and CC. The data contain only very few cases of medial or final /y/ and the picture is far from clear. CI reflexes of non-initial *y are written /y/ by Bromley.

Reflexes of initial *y have been illustrated by *man*, *doorway* (7.4.1), *cold*, *ear*, *goura pigeon* (7.4.3), *dog* (7.4.4), and *man* (7.4.5). Examples of non-initial /y/ are:

	CA	NA	CI	CC	*PA	
	ay	ayas[52]	ai	ayi	*ayi	*new*
KW	may	mayi	may	mayi	*mayi	*foot*
KP	nayi					
KN	mii					
SO	mai					

7.4.9. *w

The evidence for reconstructing *w comes mainly from KW which has preserved this phoneme in all positions. In medial and final position *w was generally lost in the Kainak subdialect of KW, in KN, KP, and SO, and also in CC and NA.

The CI reflexes of *w are /w/, /v/, and /ü̯/. /v/ is found only word-initially. Bromley gives only a few examples of initial /w/ and for only one of them I found cognates in the other Asmat languages (*crocodile*, see below). In this case the initial /w/ in CI originally was preceded by a vowel; it is possible that in CI *w developed into a labiodental fricative in initial position which at first was in complementary distribution with [w] in non-initial position but later started to contrast with [w] when medial [w] became initial, as in *crocodile*. CI /ü̯/ developed from an earlier sequence /iw/, see *ripe*, *flower*, *dried* below.

[52]Probably ay-as *something new*.

	CA	NA	CI	CC	*PA	
KW,KP KN	wow woo	wo	-	waw	*waw(o)	*wood carving*
KW KP KN	wow wao wo	-	vawa	wo	*wawa	*now, today*
KW,SO KN	wase wasa	wasa[53]	-	wase	*wase	*red earth*
KW	wowuc	-	vawta	-	*wawoTa	*middle, centre*
KW KP,KN SO	piwi pii (Ka) pii pü	-	püü	pi	*piwi	*ripe*
KW KP KN SO	ew öö ee ö	-	wö,öö	ee	*ewe	*crocodile*
KW	iwin, iwiwin	-	ü̲in	-	*i(wi)win	*pig fly*
KW	ciwew	-	taü̲a	-	*Taiwaw	*flower*
and perhaps also:						
KW	sew	-	saü̲a	-	*saiwa (?)	*dried (of meat)*

The loss of non-initial *w seems to be relevant to the development of phonemic rounded front vowels, see 7.5.1, 7.5.3.

Although KW generally preserved *w there seems to be one environment in which *w was lost in this dialect: when word-initial *w was followed by *o:

	CA	NA	CI	CC	*PA	
KW KP KN SO	uc oc- wuti wot- wiri wir- wir wir-	-	ütü ütü-	ut ot-	*wuTi woTi-[54]	*to laugh*
KW KP KN SO	onam wonamo wonomo wanam	wonom[55]	-	onom	*wonamo	*sky, clouds*
KW KP KN_1 SO	or wor wer wo	we	wor	oro	*woro	*you* (sg)

See also 8.2, *goanna* (171), *spear* (350), *steal* (357), *thatch* (368), *tree* (387).

[53]Pupis list.

[54]Cognates in Sempan and Kamoro confirm the presence of *o in this word: SE ote oto-, KA oko ko-.

[55]Irogo list.

7.4.10. Summary

Chart IX summarises the consonant changes discussed above. The historically diagnostic isoglosses representing those changes are shown on Map V.

Chart IX: Reflexes of *PA Consonants

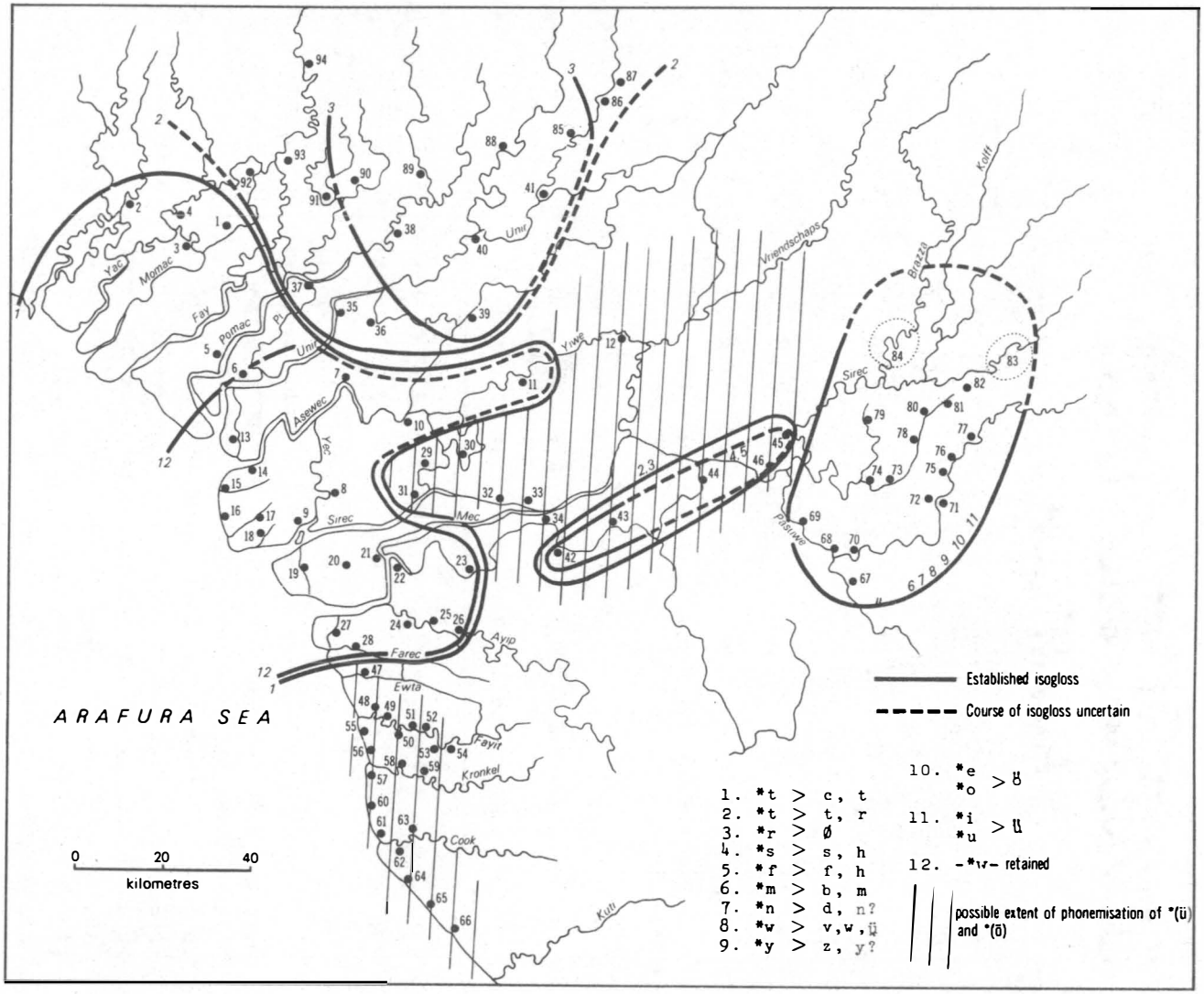
CA				NA	CI	CC	*PA
KW	KP	KN	SO				
p	p	p	p	p	p	p	*p
t,c	t	t,r	t,r	t,r	t	t	*t
k	k	k	k	k	k	k	*k
m	m	m	m	m	b,m	m	*m
n	n	n	n	n	d,n?	n	*n
f,Ø[a)]	f,Ø	f,Ø	f,h	f,Ø	f,Ø	f,Ø	*f
s	s	s	s,h	s	s	s	*s
r	r	r/Ø[b)]	Ø	r/Ø	r	r	*r
w,Ø	w,Ø	w,Ø	w,Ø	w,Ø	w,v ü,Ø	w,Ø	*w
y,Ø	y,Ø	y,Ø	y,Ø	y,Ø	z,y?	y,Ø	*y

a) f,Ø = f, or loss of *f
b) r/Ø = r in one subdialect, loss of *r in the other

7.5. Vowel Changes

The Proto-Asmat vowels have changed to a considerable extent under the influence of their environment. Alveolar consonants appear to have had a fronting and/or raising influence on neighbouring vowels; bilabial consonants exerted a backing or backing and raising influence. Often vowels have assimilated partially or totally to a preceding or following vowel; vowel sequences contracted, sometimes resulting in a vowel different from those in the original sequence. Finally, the loss of medial *w caused the phonemisation of [ü] and [ö] in at least one of the daughter languages, CI. Vowel changes have occurred over and over again in the history of the Asmat languages and as a result vowel differences are found even between speech communities within the same (sub)dialect area. The search for regularities in this wealth of changes can only be undertaken on the basis of the fullest possible data and therefore fall outside the

MAP V SOME HISTORICALLY DIAGNOSTIC ISOGLOSSES IN THE ASMAT AREA



scope of this paper. I shall therefore discuss the vowel changes only in general terms and shall point out no more than the most striking regularities[56].

7.5.1. *i

*i has been the most stable of all *PA vowels. In word-initial position *i has not changed at all and in the other positions it changed only in relatively few cases. As reflexes of *i we find /i/, /ü/, /u/, and perhaps /e/.

	CA	NA	CI	CC	*PA	
KW,SO	i	-	ii	i	*yi	*urine*
KP,KN	ii					
	pi	pi	pi	(piru)	*pi	*cassowary*

See also 7.4.1 *skin, man*; 7.4.3 *hair*.

The loss of non-initial *w seems to have created conditions under which contrast between the [ü] and [i] allophones of /i/ could develop (cf. 7.3, 7.4.9). This has happened in CI and possibly also in CC and in the KP and SO dialects of CA:

	CA	NA	CI	CC	*PA	
KW	siwin	siine	süin	(yisim)	*siwine	*bamboo*
KP	süünü					
KN	sini					
SO	süün					
KW	miniw	-	binu	münü	*miniw	*python*
KN	mini					
KW	tiw	-	tüü	tü	*tiwi	*son*
KP	tüü					
KN	tii					
SO	tü					

See also *ripe* 7.4.9, *dark* 8.3 (97), *ghost* 8.3 (162).

Following a bilabial consonant we find sometimes /u/ as the reflex of *i, and there are a few cases in which /e/ seems to be the reflex. For *i > /u/, see section 8.3, nos. 81,157,273,324,343,350,377; for *i > /e/ see nos. 59,221,326.

[56] I have left out any reference to the mid-central vowel /ə/ in CA, since more study is needed to clarify its phonological status. In many cases it seems to be a pretonic allophone of any of the other vowels.

7.5.2. *u

*u is not well attested in the data on hand. In most cases /u/ in the daughter languages seems to have developed from *i, *o, or *a. /u/ as a reflex of *u seems to be present in the following sets of cognates:

	CA	NA	CI	CC	*PA	
KW,KP KN,SO	kus kuus	-	küis	kuisi	*kuisi	*head*
KW KP KN SO	yuwur yuuri yuri yu	yui	yuur	yuuri	*yuwuri	*dog*
KW KP	yitur wuturu	-	yuturu	yutur	*yituru	*heavy*

In CI, /ü/ is not only a reflex of *i but also of *u:

	CA	CI	*PA	
KW KN	usi isi	üsi,üsü	usi	*camp*
KW	yum	züm	yum	*bird species*

Other possible reflexes of *u are /o/ (8.3, nos. 35,69,249,347) and /i/ (8.3, nos. 6,62,79,226).

7.5.3. *e

In word-initial position *e remained unchanged except when it was followed by *w, see below. Word-final *e generally remained unchanged but there are a few cases in which *e > a (8.3., nos. 237,272). Also medially *e mostly remained unchanged, but in this position we find a wide variety of possible reflexes: /a/ (8.3, no. 312), /i/ (8.3, nos. 59,326); /o/ (8.3, no. 368); /ü/ (id.), and ö (see below).

As with *i, the loss of non-initial *w created potential contrast between the rounded and unrounded allophones of *e. The development of a phonemic rounded mid-front vowel is probable for CC and the KP and SO dialects of CA; for CI, the existence of /ö/ from *e has been established. In most cases however, CI /ö/ developed from *o (see 7.5.4).

	CA	NA	CI	CC	*PA	
KW,SO	es	-	ese	es	*ese	*blood*
KN,KP	ese					
KW	ef	-	efe	ef	*efe	*finger*
KP,KN	efe					
	se	se	se	se	*se	*mud*
KW	fer	fere[57]	-	fera	*fera	*fish weir*
KN_1	fere	fee				
KN_2	fee					
KW	pew	-	-	-		*back of head*
KN	pea					
SO	pö					

See also *crocodile*, 7.4.9.

7.5.4. *o

In most cases and in all positions, *o remained unchanged. In CI the fronted allophone of *o found between non-nasal alveolar consonants (cf. 7.3) appears to have attained phonemic status and merged with the rounded allophone of *e.

	CA	NA	CI	CC	*PA	
KW	ok	-	oka	oka	*oka	*egg*
KP	oka					
KW,KP,KN	so	-	so	so	*so	*singing*
KW,KP,SO	por-	-	por-	por-	*por-	*to see*
KN	per-					
KW	nor	ne	dör	ner	*nor	*I*
KP,KN	ner					
SO	ne					
KW,KP,SO	sesak	sesak	söska	sosok	*sosaka	*black*

Quite often *o has changed into /u/ especially in the Mismam subdialect of KW:

KW	cowuc	toor	taot	towot	*TawoT	*woman*
KP	toot					
KN	toor					
SO	taot					

See also 7.4.9 *laugh*; and 8.3, nos. 53,98,187,270,300,416. Especially in the KN dialect of CA *o often became /e/ (*to see* and *I* above); it seems that the fronted allophone of *o often became /e/, as in *black* above.

[57] Irogo list.

Less frequent are cases of *o → /i/ (*laugh*, 7.4.9) and *o → a (8.3, nos. 98,122).

7.5.5. *a

In word-initial position *a remained unchanged in all daughter languages. In the other positions we find beside /a/ also /e/, /o/, /i/ and /u/ as its reflexes.

	CA	NA	CI	CC	*PA	
KW	amas	amos	amos	amos	*amosa	*sago*
KP,SO	amos					
KN	ames					
KW,KP,KN	emak	emake	emak	emak	*emake	*bone*
SO	emake					
KW,KN	ya	ya	-	ya	*ya	*movement, current*

See also *eye* 7.4.1, *hand* 7.4.3, *new* 7.4.8, *red earth* 7.4.9.

Especially in the Mismam subdialect of KW and in KN, *a often became /e/ after an alveolar consonant (see 8.3, nos. 3,15,24,115, 191,208,256,397) or in the neighbourhood of /i/. Presence of /i/ in the environment sometimes caused *a > /i/, especially in KN (see 8.3, nos. 92,110,208,295,393,397). Cases of *a → /o/ are illustrated by 8.3, nos. 39,50,69,139,264,381,393; cases of *a → /u/ by nos. 69, 266,302.

8. PROTO-ASMAT VOCABULARY

8.1. Introductory Remarks

This chapter contains a list of 418 reconstructed items of Proto-Asmat vocabulary. Almost all of these bear a preliminary character. First of all as we have seen, the regularities in the changes that occurred in the *PA vowels are still largely unknown and reconstructing a proto-vowel often is a matter of choosing between what seem to be two or more equally plausible possibilities. Secondly, gaps in the data often detract from the reliability of the reconstructed form.

With respect to the reconstructability of *PA forms I have followed two rules:

First, if cognate forms are found in at least two of the four Asmat languages, a *PA form can be reconstructed. Since all Asmat languages seem to be equally closely related to each other this is a valid assumption.

Second, if data are available in only one of the Asmat languages a *PA form can still be reconstructed if a cognate is found in at least one of the other languages of the Asmat-Kamoro family (Sempan (SE), Kamoro (KA), Iria-Asienara (IR) or in Mombum (MO)[58].

I have further used evidence from other languages in the family where it helped to clarify or give support to the reconstructed forms.

8.2. Presentation

8.2.1. The entries

The entries in the list have been ordered alphabetically according to the English gloss. Each entry consists of three to four parts:

1. The English gloss, serving as a rough label to identify the *PA form or forms that follow. If necessary, further semantic information is given in notes (see 4 below).
2. One or more *PA forms. These can be alternative reconstructions or separate proto-forms. In the latter case each of the proto-forms is starred. If the data allow to reconstruct two or more separate proto-forms, then it is likely that originally they had different but similar meanings[59] or that in Proto-Asmat there were alternative ways to refer to the same denotatum, as for instance seems to have been the case with *mother* no. 241.
3. The data. For each language - CA, CC, CI, NA (SE, KA, IR, MO) in this order - the different forms noted are given. Each form is followed by the list numbers of the locations where it was collected. A comma separates numbers belonging to different dialects. A dash between two numbers indicates that all intervening numbers have to be included (in so far as they represent locations where data have been collected, see 8.2.4).
4. Notes. They contain further relevant information of a semantic and/or comparative nature.

[58] The Mombum and Koneraw languages (Map I) have been strongly influenced by the neighbouring languages of the Kolopom and Marind families, and this has obscured their relationship with the languages of the Asmat-Kamoro family to a considerable degree. Still, Mombum data often throw unexpected light on the reconstruction of proto-forms, especially those of the ancestor language of the Asmat-Kamoro family, and for this reason I have admitted MO data as well.

[59] The difference may have been obscured by semantic shift or, what is also likely in our case, by an unrefined eliciting technique.

8.2.2. Spelling

As far as possible the Asmat words have been spelled phonemically. One should keep in mind however that areas of uncertainty still exist. ü, ö, h, and v have therefore been written also where there is doubt as to their phonological status. Tone has not been indicated, and stress only in a few words on vowel sequences. In the reconstructed forms, capital T is used in all cases in which *t has changed into /c/ in KW.

The spelling of words in SE, KA, IR, and MO follows the sources for these languages: Drabbe 1937, 1938, 1953 (SE, KA); Geurtjens 1933 (MO); Voorhoeve 1975 (IR). The Telefol data cited are from Healey and Healey 1977.

8.2.3. Symbols

In addition to the symbols already used, the following have been used in the list:

/	Separates equally plausible proto forms.
( )	If enclosing part of a proto-form; the part has been provisionally included.
< >	Encloses a form which is taken to represent all the forms of a particular word which have been collected in the four Asmat languages. Mostly it is the form found in the Suru list of the KW dialect of Central Asmat.
-	1. Precedes obligatorily possessed kinship terms. These are given without the possessive prefix;
	2. follows verb roots;
	3. separates the constituent morphemes of compounds;
	4. between numbers: see above, 8.1.1.

8.2.4. Reference numbers

The reference numbers of the locations where data have been collected are:

CA:	KW	1 3 5 7 14 15 16 17 18 21 22 24 25 26 27 28
	KP	29 30 31 32 34
	KN	35 36 37 38 39
	SO	42 43 45 46
CC:		47 48 49 50 53 61 62 65
CI:		67 83 84
NA:		86 89 90 93

8.3. Proto-Asmat reconstructions

To facilitate access to the list, two indexes have been added (Appendix I, II). The first is an index of English glosses to the Asmat words, the second an index of the words in the Asmat and related languages found in the list.

1. *above* — *ope

CA op 5 7 14 15 27, 29, 35 37 39; CC opo 62; ope 53 61; CI upu 67.

The form ope is also found in SE, KA, and IR.

2. *accompanied by* — *Tin(i)

CA cin 14 15; KA kiri.

3. *afraid* — *sone

CC son 47; sone 48 53; son, sen 61 62; SE honae; KA tono; MO to.

CA has omar 17, omer 14, 15, 25; omare 35; omore 36 37; and ome 39 43, all from an older form omare. The CC data suggest that omare is an innovation of CA but we cannot be sure until *afraid* has been noted in NA and CI as well.

4. *afternoon* — *porow

CA porow 7 14 15 24 28; poro 1, 35 37; puu 38 39; po 43; CC porow 47; poro 48; pora 53.

In KW, porow is the time of the day from approximately 3 p.m. till shortly after sunset.

5. *all* — *(a)takase

CA takas 7 14 15 24 26, 29; atakas, takas 28; mitakas 35; CC atkas 61; takase 48; NA tokose 89.

mitakas was also noted in 14 and 15. It contains a 'completive' morpheme giving it the meaning *all without exception*. Cf. 14 pacak *bad* (no. 24), mipacak *totally bad*.

6. *ancestor* — *niTur

CA nucur 7 14 15; niri 35 37; neyru 43; CC nütür 48.

In niri and neyru the intervocalic *T has become /r/ and *r has been lost, cf. 7.4.4, 7.4.5.

7. *red ant* *pirokom
CA pirkum 14 15; pukurum 7; pirokom 37;
CC pirkum 48.

8. *white ant* *penam(o)
CA penam 7 14 15; SE penamo.

9. *ant sp.* *mes(e)
CA 14 mes; SE mehe.

10. *anus* *fae(a) yofa
CA fa yof 1 7 14 15 17 18 22 24, 35 38; fa yaf 27; fa yafa 29; fa yofo 36; CC fe yaf 48 61; CI faea zafa 67.

Cf. SE fae yafa. <fa yof> means *bottom hole*, see nos. 58 and 187. The CI form cited above is Drabbe's; Bromley gives fayá which could be a contraction of an earlier fae yafa after loss of intervocalic f, cf. 7.4.3. The form given by Drabbe would then be a re-combination of the contracted form with *hole*. This leaves unexplained why -f- did not disappear in zafa.

11. *arm, hand* *mafane,(*mane)
CA man 1-24, 29-33, 35-39, 45, 46; mane 34; mahan 43; CC man 47, 48; mane 53 61-65; CI man 67, 83 84; NA man 86; mane 89 90; mafane 93.

As we saw in section 7.4.3, there is evidence that *PA *f was dropped between like vowels. However, it is also possible that both *mane and *mafane were present in *PA and had different meanings, perhaps *right hand* and *left hand*.

That both forms could have been present in *PA is shown by the KA and IR data: in both languages cognates with and without an intervocalic consonant corresponding to *PA *f occur. Thus, KA (in different dialects) mapare, mafare, mahare, and mana. IR has maheka in one dialect, mada in another.

That these forms had different meanings and

that the difference was one of *right* versus *left* finds support in data in the Ok languages. In these languages we find the forms **ban, pan,** or **ben** *forearm, arm* and **afaan, awaan, abaan** *left side*. *PA **mafane** could have been a compound of **mane** and **afane** (?) in which **mane** lost the final syllable as it did in **mapine** *upper arm* (no. 14 below) and as must have happened in Sempan which has the forms **ma-kapo** *with arms around each other's shoulder* (SE **kapo** = *locked together*), and **ma-pu** *upper arm*, but which lacks the form **mane** - at least in Drabbe's word list.

The morphological status of **-ne** is uncertain. There is evidence that it was some sort of marker, cf. section 6.2. The IR forms **mada** and **maheka** contain separate morphemes **-da** and **-ka**, perhaps class markers, as a study of its lexicon reveals.

A case parallel to that of *arm* is *ear*, see below no. 115.

12. *arm, foreleg* ***sope**

CA **sop** 1-7 22, 29, 35 37; **sap** 1 24 27; **sep** 14-16 18 24 26 28, 32 36 39; **sopmak** 43; **somak** 45 46; CC **sope** 48; NA **sep** 90; **sepe** 86 93.

The meaning noted in 14 is *shoulder and arm, but not the hand.* **sopmak, somak** are compounds of **sop** and **emak** *bone* (no. 46).

13. *arm, lower* ***mane-mo**

CA **manmo** 7 14-16 18 22 24 25 27 28; CC **manmu** 61; **manemo** 65.

For ***mane** see above, no. 11; ***mo** is also found in **emenmo** *calf of leg* no. 59.

14. *arm, upper* ***mapine**

CA **mapin** 1, 34; **mapen** 7; CI 67, 83; NA **mapəne** 89.

***mapine** is an old compound of ***mane** *arm* (with loss of **-ne**, see no. 11, note) and ***pine** (no longer found by itself) which

probably meant *upper part.* *pine is also found in *manapin *part above the eyes, = forehead;* *apin *upper part of thigh = groin* (177) and in the KW word makpin *ripples* caused by a fish swimming just below the surface of the water (mak *back* + pin).

15. *armband*

*metan(e)
CA metan 5 7 27, 31; meten 14-16 18 22 26; meren 39; NA metn 89.
Armband plaited of very fine strips of cane, cf. SE metane, KA makare *armband.*

16. *armpit*

*kape, *yamopi
CA kap 1 14-17 22 24 27 28; CI kupu 67; kabe 83. CA yamep 29 30; yomop 36 37; yomom 35; yamop 39; yamap 31 34; yamip 43; CC yamep 61; yamepi 48 65; amepi 53; NA yimap 86; yimәp 89 90; yimәpe 93.
kap in KW means *armpit*; kabe and kupu are glossed *shoulder.* *yamopi has cognates in SE (yamapi), KA (yamapu) and IR (mopuka).

17. *arrow*

*Taisa/Tiasa
CA ces 1-16; cәs 22-28; tes 29 30, 35 37, 43; tas 31; CC tasi 47 48 61; taise 53 65; CI tasa 67; NA tes 89 90.
Arrow with a wooden point. The first proto-form accounts better for the vowels in the attested forms; the second proto-form accounts better for KW /c/ and also is etymologically plausible, making it a compound of the verb root (*)Ti- *to shoot* and possibly *asa *thing* (so far noted only in KW, KP, and KN: as *thing*).

18. *arrow*

*soane
CA soane 30; sene 35 37; sön 42; NA sәәnә 89 90.
Small arrow used to shoot birds.

19. *arrow*

*firakom/firokom
CA firakam 1 5; firikom 7; firkom 14 15, 35; firkum 24-28; firokom 30 32, 37 39; fekam 42; fiakam 43 45; fi 46; CC fira 61 62; CI biakum 83; firokum 84; NA firkom 93.

Heavy arrow with a bamboo point used to shoot pigs. The proto-form was a compound of *fira *reed species, arrow shaft* (see no. 321), and an unidentified constituent *kom (?). The latter is not present in 46, 61, and 62. In CC 47 48 and 65 non-cognate forms were recorded: kaero, kaere. Initial b- in biakum, if not a notational error, is irregular.

20. *arrow*

*apa-(ne/to)

CC apoto 47; apato 48; SE apate; KA apoko.

Pronged arrow. SE apate means *split*; KA apoko is glossed *pronged spear*. CA has forms ending in ne, or n: apan 7 14-16 24-26; apon 1 16 42; apene 35 39; apne 37. I see in this word an old root apa which was combined with a suffix -ne in CA but with -to (= SE -te, KA -ko) in CC. See also 6.2, *mane, no. 11, and the parallel case of *bush fowl*, no. 56.

21. *ashes*

*yowomiTi

CA yowomic, yowmic 14 15; yowmec 7; yawamic 28; yoamic 1 24-27; yoomet 29; yomet 30; yamit 31; yimere 35; yemir 36; yumur 37; yimir 39; yomir 42 43; CC yawmuti 47 48 61 65; yowmuti 62; yomuti 48 65; CI yamit, yamut 67.

*yowomiTi is an old compound of *yowa which probably had the meaning *fire* and perhaps *sun* but which is not found by itself anymore, and *(u)miTi *ashes*. Cf. KA yaw *black ashes*; IR umida, MO imud *ashes*. See also nos. 135, 361.

22. *axe*

*si

CA si 14 15 18 26-28, 29 35; CC si 48 61; si 67.

Stone axe.

23. *back of body*

*ma(e)ke

CA mak 1 3 7 14 15 24 26, 29; maek 30; mek 34, 43; makama 36 39; makmak 5 22 26-28, 32, 35 37, 45 46; maksa 16-18; CC meke 65; memaka 48 53; mekmak 61 62; CI mek 83; mekmak 67; NA mek 89 90.

Several of these forms are compounds of *back* and a morpheme meaning *bone* (see *emake no. 46) or *hard* (-sa, also found in KW 14 mi-sa *back of the nose*); they all mean *spine* as well as *back*.

24. *bad* *peTak(as)

CA pəcak 1; puicak 7; pacak 14 15; picak 28; pota 29 30; perakas 35 36 39; petakas 37; pərak 43; CC petak 53 61; CI petek 67; NA pekas 89.

The forms with -as probably mean *something bad*, cf. ayas, fn. 52, p. 51.

25. *bag* *esa(-ke)

CA esa 1 5 22, 35 37 39; ese 7 14 15 26-28; CC esake 47; esaka 48 65; CI esa 67; NA esa 89.

Plaited bag carried on a strap around the head. Note the presence of what could be an old class marker (-ke, -ka) in the CC forms (cf. 6.2). The clearest evidence for such markers is found in Iria-Asienara. In this language the nouns seem to fall into three classes: those ending in -ra, in -ka or ʔa, and in -a or da. The IR cognate is eseka. See also *belly*, no. 34.

26. *bag* *ene

CA ene 32; en 45 46; CI ene 67; en 83.

Net bag, carried on a strap around the head. I may have missed the term in KN and NA. In the KW area net bags are unknown.

27. *bamboo* *siwine, *yisim(i)

CA siin 1; siwin 7 14 15 25 27 28; sini 32, 35 36 39; süünü 29; yiini 34; süün 42; siun 45 46; CI süin, süwin 67; siwun 84; NA siine 89.
CC isim 47 48; yisim 61 65; SE ihimi.

34 yiini is irregular.

28. *bamboo sp.* *wakan(e)

CA wakan 14 15 28; SE wakane.

Slivers of this bamboo were used as knives.

29. *banana* *uu/oo

CA uu 29, 35 37, 42; oo 34, 39; CI uu 67.

uu, oo have possible cognates in SE (owae) and IR (oa). CC has tayi, teyi, tai. These forms are possibly related to KA kau.

30. *bat* *piaw

CA piu 36; CC piaw 61.

31. *to bathe* *mui mui-

CA muí muí- 7, 36; mu mu- 14 15 28; mi mu- 37; mi mo- 39; mi mi- 35; CC mi mu- 47 61; CI mi mi- 67.

<mu> is *water*, see no. 404.

32. *bee* *emere

CA emor 5 7 14 15; emore 31 32; emere 37; ema 45 46; CC emer 61; CI ema 83; NA eme 89.

33. *behind, later* *asap(e)

CA asep 14 15; SE ahápe; KA atápea.

34. *belly, stomach* *yake, *tia(-ke)

CA yak 1-24 26, 29 34, 35-37 39; yeke 43; CI zake 67.

CC tie 48 53 61; tia 62 65; NA tek 86; teak 89; tiake 93.

Cf. SE teake *belly, intestines*, and tiafe *swollen (pregnant) belly*. *tiake probably contained an old class marker -ke, cf. *bag* no. 25.

35. *big* *awutu, *asuw

CA aut 1 7 14; awut 1 14 15 24 28; aur 35 36; auru 39; CC aot 47; awot 48 61; awat 53.

CA asuw 14 15, 37; KA atoa; IR a?ora.

14 15 asuw means *very* and is only found with a restricted set of adjectives. The KA and IR cognates are glossed *big*.

36. *bird* *soku

CA sok 7 14 15 24 27; sak 1 5 28; sako 37 39, 42; soko 36 37; soku 35, sakuu 29; sakoo 30; CI saku 67.

CC has forms with /t/ instead of /k/ as one would expect: sato 48 53 65; sat 47 61. See 6.2.

37. *bird of paradise*

*yowa

CA yomopan 7 14 15; yamapan 1; yoa 32, 45; yu soko 37; CC yomot 47 48; yawmut 61; yaomot 65; CI yoa 83 84.

In CA *yowa often has been compounded with a noun meaning *trunk, origin* (<mopan>, see no. 389). In CC it has been combined with a morpheme mot *feather* which in the KW dialect of CA is found only in a few compounds (14: sokmot *bird's feathers used as decoration*; fapmot *tail feathers* from fa *bottom*, ep *tail* and mot), but which is still found by itself in SE: moto *feather*. In all Asmat languages the word *feather* now is a compound of *bird* and *hair*.

The yellow tail feathers of the bird of paradise were associated with fire and with the sun, and *yowa probably was the word for *fire*, or *sun*, cf. *ashes* no. 21, *fire place* no. 136, and *sun* no. 361.

38. *bird sp.*

*yum

CA yum 7 14 15; CI züm 67.

The yum bird starts calling shortly before dawn and is recognized by the Asmat as the herald of the new day, like the rooster in other parts of the world.

39. *black*

*sosaka

CA sasak 7 14 28; səsak 15; sesak 22, 29, 43; CC səsaka 47 62; sosaka 65; sosok 61; CI sosəka 67; NA səsak 89 90.

*sosaka probably was bi-morphemic. The first morpheme was *sos or *sosa the meaning of which can have been *black*, or *charcoal* or even *withered, of leaves*. In KW, sos or ses now means *torch of dry sago leaves* but also *blackening* (of the bottom of a canoe by burning dry sago leaves under it); the SE cognate of

<sasak> is hoake (from hohake) and means *black*; KA has tate corresponding to CA sos, which is glossed *black, withered of leaves*. The probable cognate in MO, sor, means *charcoal* (I collected several cases of MO final r corresponding to Asmat /s/, SE /h/, KA /t/; the correspondence seems to be regular).

There is doubt as to the identity of the second constituent. It might be -ka = SE -ke, perhaps the same morpheme already encountered in *esa(ke), *tiake (nos. 25, 34), or it could be -aka and a cognate of IR a?a, aka *black*.

40. *blackpalm* *pise

CA pis 1 7 14 15 24 25, 36 37 39; pisi 35; NA pisi 89; pise 90.

41. *blind* *patey

CA peti 14 15 28; pete 1, 29; petey 7 25; pati 16; pere 42; SE peta.

In all cases noted this word is preceded by *eye*, no. 128. The KA cognate probably is pakay- *to close, block*.

42. *blister* *mor(o)

CA mor 14; KA moro.

43. *blood* *ese

CA es 7 14-17 22 27 28, 43; ese 29 30, 35-37 39; CC es 62; ese 48 61; CI es 67.

44. *body* *namo

CA nam 1 7 14-16 28; namo 29; nomo 35-37; CC nam 48 61; NA nomo 89; nom 90; num 86; CI namo 67.

45. *boil* *peme

CA pem 14-16 22 24 28; pom 7; NA peme 89; KA pema.

46. *bone* *emake

CA emak 1 14-18 24 28, 29 30 32 34, 35-37 39, 43 45; emake 7; CC emak 48 50 61 62 65; CI emak; NA emakə 89.

Cf. SE emake *bone*.

47. *bow* *amuíne

CA amon 1 5, 42; aman 7 14-16 22 24-28; amini 29; amine 30; amun 32, 43 45 46; ame 39; amne 35 37; CC amon 47; amun 48; amin 61 62 65; CI amun 67, 83 84; NA amne 89 90 93.

48. *bowstring* *amom(o)

CA 1 5 14 15, 37; amam 7; amum 39; CC amom 47; NA amo 89 90; ama 91.

The forms amo and ama probably are the result of loss of the penultimate vowel followed by reduction of the geminate consonant cluster: amomo → ammo → amo, etc.

49. *branch* *awa

CA a 14 15; áo 1; oa 29; óo 30; awa 35-37 39; áa 42; CC awa 47 48 50 53 62; áo 61.

One of the few cases in which intervocalic *w has been dropped also in KW, see 7.4.9.

50. *breadfruit* *pawo

CA pow 7 14 15 26 28; paú 29; paó 30; poó 34; paá 35; pa 36 40; po 42; CC paó 61; NA po 89 90; poó 34.

51. *to break* *pakay-

CA pakay- 7 14 15; paka- 35 37, 43; CI paka- 67.

The intransitive form. Transitive would be *paka-m-. A probable cognate in KA is poka- *to break* (intr.).

52. *breast* *awo

CA aw 1 7 14-16 18 22 24 26-28; aú 29, 43; aó 35-37 39, 30 32 34, 45 46; CC aw 61 62 65; awa 48; CI aú 67; aó 83 84; NA aw 89 90 93.

53. *brother* *-epoT

CA -epec 7; -epuc 14 15 22 24 28; -apuc 1; -epot 29 30; -per 35-37; -pur 39, 43; CI -pot 67; NA -epor 89.

Older brother. Cf. SE -pota, KA -poka, IR -apodara.

54. *brother*

*-ewaoT

CA -áoc 1; -ewec 7; -ewuc 14 15 22 24 27 28; -ewot 30; -eot 29; -or 35-37 39, 43; CI -waot 67; NA -or 89.

Younger brother. Cf. SE -ota, KA -wáoka.

55. *bundle*

*wu

CA wu 14 15; SE wu; KA wo.

Object or objects wrapped in sago leaves.

56. *bush fowl*

*owo-(ne/to)

CA owan 14 15; oán 29; owon 7, 30; one 61; óon 35 36 39; on 37; SE owoto; KA óoko.

A case parallel to that of CA apane (*pronged arrow*, no. 20). Here, again, it seems that different languages in the family share the same root, but have added different suffixes.

57. *butterfly*

*foTo

CA foc 14 15; fat 7; far 35 37; CC foro 48; for 65.

CC /r/ : CA /c,t,r/ is one of the unexpected sound correspondences mentioned in 6.2. IR has buri, KA uri or wiri which could regularly correspond to forms like far, foro, but not to foc, fat. This field of cognates still is a problem.

58. *buttocks*

*faemore

CA famor 7 14-18 24 27 28, 29; famar 1-5; famer 35; fame 38 39; femore 34; CC femoro 48 61 62; NA famor 86; famʷa 90; femore 93.

*faemore probably was a compound of *fae *bottom, posterior* and *more which I have not been able to identify with certainty. Perhaps it meant something like *bulge* and is represented in CA by mor *blister* (no. 42), and in KA by mora, moro *blister, air-bubble floating on water*, see also no. 42.

59. *calf of leg*

*iman-mo

CA emenmo 7 14-17 21 26 27; imenmo 24 28; imenmos 5; imanmos 3; emin nes 43; emenmo nesa 31; emen nas 1; CC emenmo 61 65; mo 48; mu 53; CI iminmu 67.

The KA cognate of *iman is imiri and means *whole leg including the foot*. This probably was the original meaning which in the Asmat languages shifted to *lower leg* (e.g. CA 14: emen-meten plaited band worn below the knee, cf. no. 15; emen-mak *shin bone* cf. no. 326). *mo meant *lower part of limb* as it still does in words meaning *lower arm*, see no. 13, and *iman-mo must have meant *lower leg* as it still does in CA 31 where it has been combined with nesa *flesh*. The semantic shift from *whole leg* to *lower leg* seems to have caused the shift from *lower leg* to *fleshy part of* in *mo which in CC came to mean *calf* by itself. Some CA forms have a final /s/. Presumably -mos is a blending of mo and nes *flesh*.

60. *to call*

*yate-

CA ate, yate 14 15; ate 28; yate 29; yete 7; yere 43; yer 35; CC yete 61.

CA 14 15 ate, yate are allomorphs.

61. *camp*

*usi

CA usi 14 15; usu 7; üsü 26 28; isi 37; CI üsi.

A stay overnight outside the village in a temporary dwelling near the sago swamps or fishing waters.

62. *canoe*

*Tiú

CA ci 1 7 14 15 18 22 24; cu 25-28; tu 29; ti 35 37-39, 30 32 34, 42 45; CC tu 48 50 61; ti 57, 65; CI ti 67, 83 84; NA ti 89; tu 90.

The SE and KA cognates have /u/: SE tu, KA ku *canoe*.

63. *to carry*

*noT-

CA noc- 7 14 15; not- 29; nor- 35 37 39;

KA noko-, neke-. CA <noc-> = *to carry on the shoulder*. noko-, neke- are glossed *to carry a heavy object*.

64. *carving* *waw(o)
CA wow 7 14 15 22 27 28, 31; wao 34; wóo 38; CC waw 65; NA wo 89 90.
Wood carving, carved design, drawing.

65. *cassowary* *pi, *piru/puru
CA pi 1 5 7 14-15 17 27 28, 29 30 32, 35 37 39, 42 45 46; CI pi 67, 83.
CC piru 47 48 53; puru 61 65.
The CC forms have a possible cognate in IR: buri *cassowary*.

66. *casuarina tree* *yiwase
CA yuwas 14 15; CC yiwes 61; yiwəse 65.
*yiwase may have been a compound of a tree name *yiwi and *wose *tree* (no. 387). Cf. SE iiwi *casuarina tree*.

67. *cave, cavity* *yip(a)
CA yip 7 14; SE ipa, KA ipa.
SE, KA ipa are both glossed *hole, opening*.

68. *centipede* *ani
CA an-okos, an-mewit 7, 14 15; CC ani 65; CI ani 67.
anokos: centipede with large nippers (okos); anmewit: millepede which phosphoresces like a firefly (mewit) when squashed. *ani has cognates in KA (aru), IR (anəra), and MO (an) *centipede*.

69. *centre, middle* *wawoTa
CA wauc 1; wowoc 7; wowuc 14 15; wuur, woor 37; CI vawta 67.
The KA cognate is wayku or wawku; SE has way *centre*.

70. *ceremonial house* *yawe
CA yew 7 14 15 24-28; yö 42; yáe 31 34; ye 5, 36; CC yaw 47.

71. *charcoal*

*yaka
CA yak 1 7 14 15 18 22 24 27 28; yaka 35 36 38 39; CC yaka 47 48 53; yak 65.

72. *charcoal, black*

*sos
CA sos 7 14 15; ses 14; KA tate; MO sor.
sos, ses = *blackening, scorching, torch of dry palm leaves*; tate = *black; withered of leaves;* sor = *charcoal*. For more details see no. 39.

73. *cheek*

*ake
CA ak 1-7 14-17 22 24 26-28, 37; ake 29 31 34; aka 35 39; CC ak 61; ake 48 65; CI ake 67.

74. *chest*

*awuy(a), *yamom
CA aú 1 3; awu 5 14 15 18 22 24 27 28; awi 7; aw fak 1-5; CC wawi 61; awuá 48 65; awué 53; NA aw fak 89 93; ay fak 86.
CA yamam 14 15, 34; yamom 29 30; yamum 43; CI zamom 67.
fak = *hard, strong*, see no. 179. In all cases noted, aw fak occurs as an alternative name; in 1-5 beside aú or awu, in 89 and 93 beside woni and one respectively. 14 15 yamam means *side of the body*; the meaning *chest* seems to be restricted to KN and CI.

75. *child*

*yiwi
CA yiwi 7 14 15 22 25 26 28; yií 1, 37; yüü 29; CC yiwi 53; yií 47 61 62; ii, iwi 48; NA yií 93.

76. *to climb*

*tomet-
CA tomet- 7 28; 29; temet- 1 14 15; tomor- 35 37; temer- 39; tamer- 43; CC tomot- 61 62.

77. *cockatoo*

*yur, *turu
CA yur 5 7 26-28; yir 14 15; iir 36 37; IR urə.
CC turu 48 65; tur 47 61; NA tüi 89; tüü 90; IR aturə.
White cockatoo. Both IR urə and aturə are glossed *white cockatoo*.

78. *coconut* *yusini
CA yisin 1 14 15, 42; yusun 5 7; yusini 29; isun 27; yisini 34; isin 24 28; CC yüsüni 53; yüsini 61 62; üsüni 50; yisün 47 48; CI zisin 67.

79. *cold* *yufo(-to/ko)
CA yufo 14, 35 36; yufu 1 7; yofo 39; yufok 37; yifo 14 15, 30, 43; yife 29; yif 28; CC yufut 47 61; yufuto 53; CI zufu 67.
Cf. SE ifako. For -to, -ko see 6.2, fn. 40.

80. *to come* *enaw-
CA enaw- 7 14 15 28, 29, 35; CC enaw- 61; CI enaw- 67.
To come up the river from en- *row up a main river* and naw- *come*. naw- has cognates in SE, KA (nao) and in IR (nawa) *come*.

81. *container* *muis
CA mus 1 14 15 26 27, 45 46; muis 32; CI bus 67, 83.
Bamboo water container. *muis probably was a compound of *mui *water* (no. 404) and a morpheme *isi or yisi, *bamboo*, cf. IR itə *bamboo*, KA muiti, itítu *bamboo species*.

82. *contents* *Tenam
CA cənam 1 7 14-17 22 24 26-28; tenam 29; tenem 35 37; tanam 39; CI tanam 67.
14 15: *soft contents*, thus kus cənam *brains*, mamak cənam *eye-ball*. See also *sun*, no. 361.

83. *core, kernel* *apok(e)
CA apak 14 15; apok 7; KA apeke, apoko.

84. *cough, phlegm* *os(e)
CA os 7 14 15; SE oho; KA otay.

85. *crab* *pea
CA pe 7 14 15 24 28; pa 1, 36 37 39; pae 42; CC pea 47 48 61 62 65.
Cf. SE, KA pea *crab*.

86. *crayfish*

*sunok
CA sinak 7 14 15; sunok 28; sonok 37;
CC sünak 65.

87. *crocodile*

*ewo
CA ew 7 14 15 27 28; ee 37 39; e 36; öö 30;
öó 29; ö 35, 42; CC ö 47 48; öö 53; ee 61 62
65; CI wö, ööö 67.

88. *crooked*

*fasi, *yamer
CA fasi 7 14 15 28 29; CC fasi 48 61.
CA yamor 7; amer 37; SE yame; KA yamer-are.

fasi means *crooked, improper, wrong*; the SE and KA forms are glossed *crooked*; yamor however seems to refer to moving in an arc or circle.

89. *to cross a river*

*yir-
CA yir- 7 14 15; KA ira-.

90. *crust*

*anoko
CA anuk 14 15; anok 1 7, 39; CC anako 50.

91. *to cry*

*maTi maTi-
CA moc moc- 1 14 15; mec mec- 7; mac mac- 28;
mate met- 29; mere mere- 35 37; muru muru- 39;
mor mor- 42; CC mate mate- 47 53; mat mat- 61;
moto moto- 65; CI bati bati- 67; NA muru muru-
89.

92. *cuscus*

*faTi
CA fac 7 14 15 28; fate 29; fere 35; firi 36 37;
furi 39; CC fat 47 53 61 65; CI fati 67; NA
fare 89.

93. *to cut down*

*mo-
CA mo- 7, 37 39; ma- 14 15; CI bo- 67.

94. *to cut through*

*sakam-
CA sakam- 7 14 15, 29, 35 37 39, 43; CC sakam-
61 62; CI sakam- 67.

95. *to cut up*

*Ti-
CA ci- 7 14 15; ti- 37; KA ki-.

96. *to dance* *ni ni-
CA ni ni- 7 14 15, 37; KA ni-.

97. *dark* *yiwiTi
CA yiwic 7 14 15 28; yüütu 29; yür 35;
CC yit 61; CI züüt 67.
Cf. SE iwiti, KA iiki *dark*.

98. *daughter* *-porawis
CA parais 1; porais 5; peres 7; puris 14 15 25 26; pores 22; parwis 24 28; porewis 27; parayüs 29; piris 35; paiwas 43; CC porais 47; pereis 61.

99. *day* *mar(e)
CA mar 7; mer 14 15; SE mare; KA mara-tya. *period of one day*.

100. *dead* *namiri
CA namir 7 14-16 24 28, 29; nimir 35, 43;
CC namir 61; namiri 62; CI damir 67.

101. *deaf* *miri
CA miri 1 7 14 15 24 28, 29; mir 35 37;
CC mire 61.
In all cases noted miri is preceded by *ear*, no. 115. For example 14: yen miri.

102. *deep* *kaku, *mamuí
CA kaku 1 7 14 15 28, 29; kok 35 37; CI takua 67.
CA mamui 7; mamu 14 15; KA mamu.
The initial /t/ in takua is irregular. KA mamu is glossed *deep*; mamuí is glossed *mouth of a river* (Drabbe 1959b) but this is incorrect. Mamu is the deep spot one usually finds at the confluence of two rivers.

103. *to dig* *si-
CA si- 7 14 15, 29, 35; CC si- 48.
Cf. SE hi-, KA ti- *to dig*.

104. *digging stick* *womo
CA om 7 14-16 24 26-28, 42; omo 31 34; CC wom 65; NA omo 89.

105. *dirty* *ponow(a)
CA ponow 7 14 15; SE pana-ko; KA panawa.

106. *distribution* *say
CA sey 1 7 14 15; sée 39; CC say 62.
distribution of food, goods. Cf. SE hay- *to distribute*.

107. *to do, make* *em-
CA em- 7 14 15, 29, 35; CC em- 61; CI em- 67.

108. *dog* *yuwuri
CA yuwur 14 15 22 24 26-28; yuur 1 7; yúuri 29 35; yuri 30 32 34, 36 37; yúu 39; yu 45 46; yo 42; CC yuur 47; yúuri 48 50 61; yuru 65; wuri 50; CI zuur 67; yur 83; NA yui 89; yuye 90; yuuro 93.

109. *doorway* *yimasapi(ne)/yimasapu(ne)
CA yimasap 5 7, 29; yimsip 14 16 22 24 28; yumcip 15; imsip 27; yumsap 31 34; yimsep 37; yünsep 35; yinsup 42 43; CC yimsepin 61; yinsepe 62; yinsupu 65; isepini 47; sepin 48; NA yisipene 89 90.
The length of the proto-form shows that it was a compound, but its constituents could not be identified. The last one could perhaps be a morpheme meaning *pathway*, CA pu. It seems to have been able to take the suffix -ne (cf. nos. 11, 20, 56). KA has imapu, SE imahapi *door*.

110. *to dream* *ese tam(-iti/as)
CA isi tamut- 1; is tamut- 14 15; isi tamit- 7; ese tamit- 29; isi timiri 35 37; CI ese tamas- 67.
For *ese see no. 339 *sleep*. *iti probably marked a stative aspect (*being in a state of...*), as its KW descendant does (KW -it/ut). *as probably marked a continuous or long lasting action (*to dream away*).

111. *drum*

*eme

CA em 5 7 14 15 26-28; eme 29 31, 39; CC em 61; CI eme 67; NA eme 89 90.

112. *dry, smoked (of meat)*

*saiwa (?)

CA sew 7 14 15; CI saüa 67; SE hawa.

For the reconstruction of *i see 7.4.9. CA sew means *dried or smoked over a fire* (of meat). A possible cognate in SE is hawa *roasted*. This would point to a proto-form *sawa rather than *saiwa.

113. *dry*

*sosot

CA soso 1 7 14 15 22 28, 35; CC ses 47; sosot 61; CI sösö 67.

Cf. IR sosota *dry*; KA toto-ko *very dry*. See 6.2 and footnote 40.

114. *dry*

*sa

CA sa 7 14 15, 29, 35 37 39, 43; NA sa 89.

7 14 15 sa = *dry, dead of wood or plants, barren.*

115. *ear, sound*

*yane(-maka), *yafane

CA yan 1-7 24 26-28, 45 46; yen 14-17; yane 29 31 32 34, 35-37 39; yanmak 1 5 24 27 28; yenmak 14-16; yene 30; yahan 43; yanma 38; CC yen 61; yanemake 48; yanəmak 62; yenmaka 65; CI zan 67; yane 84; yani 83; NA yan 86; yene 89 90 93.

The forms without <mak> mean *sound* as well as *ear*; those with <mak> only mean *ear*. The constituent maka, make, mak, or ma I found only in two other names of body-parts: *eye* (no. 128) and *nose* (no. 260). Its similarity to *back* or *bone* (nos. 23, 46) seems to be accidental; it is not clear what its meaning was.

The reconstruction of *yafane rests upon the single instance of /h/ noted in 45. However, cognates in KA and IR show that *PA must have known a form *yafane: KA yawana, ihani, ihini, ifini (in different dialects); IR yaha and fada

(from an earlier form yafada). Note the parallel with *arm, hand*, no. 11, and see the comments made there.

116. *earth, ground* *Tapini-mi

CA capinmi 1 7 14 15 24 25 27 28; tapinimi 34; tepinmi 29; tepenemi 39; tepmi 36 38; takmi 35 37; CC tapinmi 61 62.

7 14 15: also *land, territory; dry ground (elevated above flood level)*. In 14 15, capin occurs by itself and means *plot of dry ground*. <mi> means *nose*, but also *land point, spit of land*. takmi (with dissimilation of /p/ ?) seems to be irregular.

117. *earth, mud* *se

CA se 1-15 22 24 26-28, 29-34, 35-37 38 39, 42 45 46; CC se 47 48 50 61 65; CI se 67, 83; NA se 86 89 90 93.

118. *earthquake* *ayowe

CA ayow 7 14 15 22 28; ayie 35; ayee 29; aíye 37; CC ayüye 61; CI ayaw 67.

119. *to eat* *na-, *ne-

CA na- 1 7 14 15 28, 29, 36; ne- 43; ne-, na- 35 37; CC na- 53 62; ne-, na- 61; CI de- 67; NA ne- 89.

In 35, 37, and 61, na- and ne- are allomorphs.

120. *edge* *pima

CA pim 7 14 15 22 24, 42; pima 37; SE pima; KA pimini.

121. *egg* *oka, *sa

CA ok 1 7 14 15 24 28; oka 29 30, 36; CC ok 61; CI oka 67.

CA sa 7 14 15, 35-37 39; SE ha; KA ta; IR sa.

In KW, sa means *bush fowl egg*; in KN sa seems to refer to eggs in general, but in 36 both oka and sa were noted. In SE, ha is glossed *cassowary egg*, and oka is the general term. KA has ta, IR sa, both glossed *egg*.

122. *elbow*

*sonane

CA sonan 1-5; sonon 7 24 27 28; sənen 14-18 22, 43; sonone 29; senene 35; senane 31 34; senmak 36 37; samak 39; CI sönan 67; NA sonone 93; sənənə 89 90.

This is one of the items which possibly contains an old suffix -ne (see 6.2; nos. 11,20, 56,109), cf. SE honane, KA tora-po, MO ton. IR has mane fora, mane pura (mane = *arm*) in which fora, pura could be cognates of KA -po. In 36, 37, and 39 a shortened form of *sonane (loss of final and penultimate vowel, reduction of geminate cluster, see 3.3.3) has been combined with *emake *bone*; in 39 the cluster -nm- has been further reduced to -m-: sanmak → samak.

123. *empty*

*fi, *nasmin

CA fi 1 7 14 15 28, 29; CC fi 61.

CA nesmin 14 15; SE nahamona; KA natamina.

nes, naha, nata mean *flesh, pulp, edible contents of fruit*, cf. no. 143; mona, mina are negative particles, and the SE and KA forms therefore mean *without contents, empty*. CA min is a relic form and nesmin is one of the few words in which it still occurs. nesmin has acquired a meaning different from its SE and KA cognates: *foreign, strange, not belonging to one's own group*, literally: *not (of one's own) flesh*.

124. *to enter*

*yiw(i)-

CA yiw- 7 14 15; SE iwi-; KA ii-.

125. *erect*

*sor(o)

CA sor 7 14 15; KA toro

CA 7 14: cəmen sor *erect penis*; KA toro *semen*.

126. *excreta*

*asa

CA as 7 14-17 22 24 27, 42 43; ase 35 37 39; asa 29; CC as 61; asa 48 65; CI asa 67.

127. *to extinguish* *sapim-

CA sapim- 7 14 15, 29, 35; CC sepim- 61.

Cf. SE hapim- *extinguish.*

128. *eye* *man(-aka)/mana(-ka)

CC manak 47 48 61; manaka 50 53; CI manak 67; banak 83; banatan 84; NA manak 89 90 93; menek 86.

CA manamok 1 5 7; manamek 32 34; manmak 14-17 22 24 26-28, 29 31, 38; mamnak 36 37 43; mamak 36 37 39, 42 45.

*PA had a morpheme *man or *mana meaning *eye* which does not seem to occur by itself anymore. The IR cognate is still a separate word: mana *eye*. In CA, *mana was combined with a morpheme *maka, probably the same as is found in *ear* (no. 115), of unknown meaning. In the KW dialect of CA we find man < *mana in a number of old compounds, e.g. 14 mantam *look-out*, manpin *forehead* (no. 150). In the other Asmat languages, *mana was combined either with a morpheme *eake *fruit*, no. 155 (in Papuan languages an often occurring combination), or with a suffix -ka, perhaps a class marker. CI banatan could mean *eye-ball*. Cf. KW manmak cənam *eye-ball*.

129. *to fall* *now-

CA now- 7 14 15; nu 37; KA nao-.

130. *to fart* *asa pum-

CA as pum- 7 14 15; SE ahame pumu-; MO ar pu-.

For *asa see *excreta*, no. 126.

131. *fat, grease* *oma

CA om 14; oma 35-37 39; CC oma 48; ome 53 65; CI oma 67.

132. *father* *-wiT, *-ote

CA -icipic 1 7 14; -wic 7 14; -itipit 29; CC -üt 61; CI -itipit 67.

CA -ot 30 32; -ar 43 45 46; CI -ate 83; NA -ar 89.

-ipic, -ipit is a morpheme meaning *male*. In all cases noted the compound form has lost the initial /w/. In 7 and 14 both -wic and -icipic are found as terms of reference, seemingly without difference in use or meaning. KA has, in different dialects, cognates with and without /w/: -iku, -wiko. SE has -wito. The relationship of *-wiT and *-ote is not clear. A possible cognate in the KW dialect of CA is -otipic *(classificatory) brother*, a term used only by women.

133. *female*

*Tapes

CA cəpes 7 14 15; tepes 35-37 39; tapes 30 32, 43 45 46; CC tapes 47 48 61 62; CI tapes 67.

In KW, cəpes also means *women, wives*.

134. *finger, twig*

*efe

CA ef 1-28; efe 35 37-39, 30 31, 46; CC ef 61 65; efe 48.

In the first sense always preceded by *hand*, in the second by *tree*.

135. *fire*

*yusa-mak

CA yismak 1 5 7 14-16 25 26, 30 31, 35 37 38, 43; yüsmak 29; ismak 26-28; yimak 39; yimuk 45 46; CC yüsmak 48; yisa 61 62 65; isa 47; CI isa 67; yisa 84; yisamuk 83; NA yismak 90; yüsmak, yumak 89.

*yusa-mak was a compound of *yusa *firewood, fire* (no. 138) and a morpheme which probably meant *burning, glowing*, cf. KW 7 14 15 mak *glowing embers*. SE has yuha-make, KA uta, IR usa *fire*.

136. *fireplace*

*yowase/yowasa

CA yowse 7 14-16 18 22-28; yoosa 1; yosa 35; CC yawa 47 48 61 62 65; CI zawas 67; NA yose 89.

Asmat fireplaces have a basis of mud, se (no. 117) and it is possible that se is the second constituent in *yowase, the first being the same morpheme as found in *yowomiTi (no. 21) *ashes*, and *yokomen (no. 137).

137. *fire tongs* *yokomen
CA yokmen 14-16 24 27; yukmen 28; yakomen 31; CC yakomen 48.
*yokomen: the etymology is unclear. yo can be identified as *yowa, a morpheme also found in *ashes* (no. 21) and *fireplace* (above); komen could be *joint*, see no. 202.

138. *firewood, fire* *yusa
CA yis 1 5 7 14-16 26, 31, 35 37 39; is 27 28; yüs 29; CC isa 47; yüsa 48; yisa 61 62 65; CI isa 67; yisa 84; NA yise 89; yüsa 90.
Cf. SE yuha, KA uta, IR usara *fire*.

139. *fish* *enamo
CA enam 1 7 14 15 24; enamo 29 30; enəmo 36 39; enmo 35 37; enom 42; onem 28; CC enam 47 48 53 61 62; NA ənəmo 89 90.

140. *to fish* *pi-
CA pi- 7 14 15; SE, KA pi-
CA yim pi- *to fish with a small net*, see no. 141.

141. *fish net* *yime
CA yim 1 7 14-16 25-28; yimi 29, 35 37; CC yim 48 61; CI zimi 67; NA yime 89 93.
Net fastened in a rattan hoop and used to scoop up fish or prawns in shallow water.

142. *fish weir* *fera
CA fer 14-16 24-28; fere 35; fée 39; CC fera 47; NA fere 93; fée 89; fe 90.

143. *flesh, meat* *nasa
CA nas 1 7 22 24 27 28, 45 46; nasa 29 30 32 34; nes 14 15, 43; nesa 31; nese 35 37 39; CC nasa 48 53 61 65; CI dasa 67; NA nes 86; nesa 93; nese 89 90.

144. *flower* *Taiwaw
CA ciwew 14; CI taüa 67.
See 7.4.9.

145. *house fly* *opoto
CA opot 1 7 18 28,29; opat 14 15 22; upur 35 37; upir 39; CC opoto 47 48 53; opot 61 65; CI uput 67; NA pere 89.

146. *pig fly* *i(wi)win
CA iwin 14 15 22 28; iwiwin 7 14; iín 35 37; CC ÿin 67.

147. *to fly* *pi-
CA pi- 7 14, 29, 35; CC pi- 61; CI pi- 67.

148. *flying fox* *tare
CA ter 14 15; tar 7; tare 29, 35 37; tere 36; CC tare 47 48; tar 61; CI tare 67; NA tée 89.

149. *foot, leg* *mayi/mawi
CA me 1 3, 36; mey 7; may 14-17 22 24 28; mayi 29 31 32, 45 46; mai 30 34, 43; mée 39; mí i 35 37; mew 5 26; CC mayi 48 53 61 62 65; CI bay 67; bayi 83; bue 84; NA mayi 89; maye 90; mí i 86 93.

Cognates in SE and KA have /w/: SE mawi, KA maw; those in IR have v : mavura.

150. *forehead* *manapin
CA manápin 1-5, 31; manpin 14 15 17 24; minipin 35; munipin 37; CC manepin 47 61; CI banapin 67; NA minipin 89.

An old compound of *eye* and *upper part*, see nos. 14, 128.

151. *forest* *wasane, *wa
CA wasen 1 14 15 22 24, 29, 35 37, 43; wasan 5 7, 39; CC wasene 47 48 61 65.
CA wa 14 15; we 7; KA wao.

Cf. SE wahane, *forest*. In KW, wasen, wasan also means *land* as opposed to sea or river. It is a compound of wa and asen or asan *place*.

152. *frog sp.* *eTo
CA eco 7 14 15 28; eto 34; CC eto 61.

Cf. SE eto. CA 35, 37 have woro, NA 89 has

wərə. .These forms probably are onomatopoeic.

153. *frog sp.*

*miTin
CA micin 7; mucin 14 15; mitin 29; mitn 37;
CI mitin 67.
Large green tree-climbing frog.

154. *front (of body)*

*Topon(e)
CA cupun 7 14; SE topene; KA kopane.

155. *fruit*

*eake
CA eak 1, 35 37 39; ek 7 14 15 24, 29 30, 42;
CC eke 48; ek 62; yek 61; yeke 47; CI ek 67.

156. *fruit sp.*

*samo
CA sam 7 14 15, 42; sem 40; CC 47 48 50.
The locally used Indonesian name is jambu hutan.

157. *full*

*umi/imu
CA imunakap 1; imi 7, 29; umunakap 14 15;
CC imi, ümü.
imunakap and umunakap are adjectives derived from the noun imu, umu *top of an object, crown of a palm tree* (see footnote 3). A possible cognate in SE is umiwi in umiwi mi *flooded river.*

158. *full, replete*

*pita
CA piti 1 7 14 15, 29; pir 35; CC piti 47;
CI peta 67.

159. *gall*

*yiri
CA yir 7 14 15; yira 29; yirak 35; CC yir 61;
CI ziri 67.
Cf. SE, KA iri *gall.* yirak possibly is an old compound (*yiri + *eake *fruit* ?).

160. *garden, clearing*

*was(a)
CA was 7; wos 14 15; SE waha; KA wata;
MO par (?).
waha is glossed *clearing for garden*; wata *uninhabited, empty*, and par *garden.* KW was, wos usually refers to a clearing made for a house.

161. *ghost* *nat(o)
CA net 7 14 15 27; CC nat 61; SE nato.

162. *ghost* *miwi
CA miw 7 14 15; miü 29; mii 35; CI büü.
Cf. KA mii, miwi *dangerous spirits of dead people.* In KW, miw are malevolent ghosts as is shown by their blood-shot eyes. net is anybody who has died.

163. *to give* *tetam-, *tatam-
CA tetam-, tatam- 7 14 15; tetam- 1, 29; tatam- 28; tam- 39, 43; CC tetam- 47 61; CI tatam- 67.
CA tetam- *give* (sg. object) and tatam- *give* (pl. object) are old compounds consisting of tew- *take* (sg. object) or taw- *take* (pl. object) and tam- *cause to reach.* Cognates of tam- in KA and IR are glossed *give*: KA kema-, IR gema, gama; SE has teatamo.

164. *to give birth* *pe-
CA pe- 7 14 15; SE, KA pe-.

165. *to go, walk* *yar-
CA yar- 1 7 14 15, 29, 36; ya- 39, 43; CI zar- 67.
Cf. SE yare- *to go.*

166. *to go down* *kor(a)-
CA kor- 7, 14 15; SE kora-; KA koro-.
The SE and KA forms are glossed *descend, go down*; the CA form means *to start a movement* and it most frequently found in combination with ni- *go down* (no. 167): kor-ni- *to fall off* (of a ripe fruit).

167. *to go down* *nay-, *now-
CA ni- 1 14 15, 36 37 39; ne- 19, 29; ney- 7; CC nay-, ney- 61.
CA now- 7 14 15; nuw- 14 15; CC nuwa- 61.
<ni-> means *descend, go down a main river; go home.* now- is used in the special sense of

to fall down, of rain. nuw- is found only in nuw-uw- *to go down to the river and depart (by canoe).* Although historically linked to *now-, it can be interpreted synchronically as an allomorph of ni-. Cognates in SE and KA are SE naw-, KA nu- *to go down.*

168. *to go outside* *yis-
CA yis- 1 7 14 15, 37; SE ihi-; KA iti-.

169. *to go up* *tepe-
CA tep- 1 7 14 15 28, 37; tepe- 39; tip- 35; CC tipe- 62.
Cf. SE tepe- *to go West.* CA <tep-> means *to go up a tributary*, see also no. 170.

170. *to go up* *Tin-
CA cin- 7 14 15; tin- 36 37; SE tini-; KA kini-.
The SE form is glossed *to go East*, the KA form *to go up the river.* In CA this verb root means *to go up a main river.* In KW it is found only in combination with the accompaniment marker o- : o-cin- *to go up the river with someone.*

171. *goanna* *wuTi
CA uc 7 14 15 28; wiri 37; NA wiri 89.
Probable cognates are SE ote, KA oke *lizard species.*

172. *good* *akot
CA akat 1 7 14 15 22 24 28; akot 29 30 32; CC akat 47 53; CI akot 67; akut 83.

173. *goura pigeon* *yofo
CA yo 14 15 28, 37; yu 7, 29; CC yoa 47; NA yufu 89 90.
For the loss of intervocalic /f/ see 7.4.3. /f/ is also found in the SE and KA cognates: SE ifo, KA (in different dialects) ufu, uhu, úu *goura pigeon.*

174. *grandfather*

*-ak, *afok

CA -ak 1 7 14 15 22 24, 29, 35 37 39; CI -ak 67; NA -ak 86.

CA afok 37; NA afok 86; SE ofo, afáoro.

*-ak is the term of reference, *-afok the term of address. The SE forms are both glossed *grandfather*. In CA the term refers to both paternal and maternal grandfathers, and also to the husband's father.

175. *grandmother*

*-asok

CA -sok 7 14 15 22 24 28, 29, 35-37 39; -sak 1; CI -asak 67; NA -sok 86.

Cf. SE oho, aháoro; KA atao *grandmother*.

176. *grass*

*fomini

CA fomin 14 15; fumin 7, 29 34; fimin 24-28, 42; fomn 35; CC finumu 50; fimini 65; CI femen 67.

177. *groin*

*apin(i)

CA apin 7 14 15; KA apiri.

178. *hair (of head)*

*(u-)fini

CA 1-15 17 18 22 24 26-28, 31, 43 45 46; fina 29 30; fini 35-39, 32 34; ufun 37; CC fini 47 61; ufini 48 53 62 65; CI fini 67, 83 84; NA fine 93; ufin 86; ifine 89 90.

The initial vowel in this word appears to be an old morpheme which probably meant *head*. In the Asmat languages I found it only in combination with *hair*. It has cognates in KA: uwu, uhu, ufu *head* and in SE: ow-eke *head, skull*, and ow-ihi *brains*. See also no. 181.

179. *hard, strong*

*feak

CA fak 7, 29; fek 14 15; feak 35 37; CI feak 67.

Cf. SE fake *hard*.

180. *he*

*are

CA are 37; ar 1 7 14 15, 29, 35; CC ar 61; CI ar 67.

181. *head, brains* *kuisi

CA kus 1-5 14-16 22 27 28, 29 31, 42; kuis 7 16 24; kuus 32, 35-37 39, 43 45 46; CC kuisi 61; kusi 50; CI küis 67; kuus 83 84.

*kuisi was bi-morphemic and probably meant *brains*: *ku *head* and *isi *contents*, cf. SE ow-ihi, KA iti *brains*. The CC forms still mean *brains*, the word for *head* being utow. In CA and CI the meaning shifted from *brains* to *head* which was then combined with another word meaning *contents* to denote *brains*: <kus cənam>, see no. 82.

It seems then that *PA had two morphemes, *ku and *u both in some way connected with the meaning *head*.

182. *heart* *eak-Tan, *sok-Tan

CA ekcan 7; eák 1, 37; eáktan 29; eákten 35; CC eák 61; CI eke 67.

CA sokcen 14 15 18; SE hoke; KA toke.

*eakTan consists of *eake *fruit* (no. 155) and an unidentified morpheme *Tan. The latter is perhaps also found in 84 banatan *eye* (no. 128). SE hoke means *heart*; KA toke is glossed *lungs*.

183. *heavy* *yuturu/yitoro

CA yitur 1 14 15; yutur 7; yitor 28; wuturu 29; CC itur 47; yutur 61; CI zütürü 67.

Cf. IR idoroa *heavy*.

184. *heel of foot* *Timi

CA cimi 1-7 14-17 24; cumi 26-28; timi 34, 35 37; tim 43; tümi 29 31; CC tim 61, tümi 48; CI tüma 67; NA tümi 93.

The KA cognate probably is kimi *lower part of leg*. *Timi could be a compound of *Tim and mi *tip, point, nose*.

185. *high tide* *pu-mui

CA pumui 7; pumu 14 15; pum 37; CC pimi 47 65.

From *pu *nearby, close* and *mui *water* (no. 404). Cf. SE pu-mi *high tide*.

186. *hip*

*asini
CA asin 7 14 15 26 28; asini 34; CC asini 48.
Cf. SE ahini *upper part of leg*, KA atiri *thigh*.

187. *hole*

*yofa
CA yof 7 14 15 27 28; yafa 29; yofo 35-37 39;
CC yof 61; yafa 50; yaf 65; CI zafa 67;
NA yofo 89; yafa 90; yufa 93.

188. *horn*

*fui
fúi 7 25-28, 31 34; fu 14 15; fi 37; CI fíi 67;
NA fu 89.
Bamboo signal horn.

189. *hornbill*

*yiru
CA ir 7 14 17, 37; ii 39; fofoyir 22, 31;
CC yiru 65; yir 61; yər 48.
Cf. SE iiro *hornbill*. fofoyir seems to contain an onomatopoeic part fofo, an imitation of the swishing sound made by the wings of flying hornbills.

190. *hot*

*amapo, *amam
CA amop 1 7 22 27 28, 29 30; amup 14 15, 35-39, 43; CC amap 47 48; amapo 53.
CI amam 67; KA amamuru.
Cf. SE amapoto, IR amwa, MO umo *hot*.

191. *house*

*Tame
CA cem 1 7 14-16 22 24 26-28; tame 29 30 32 34; teme 35 37-39; tem 42 43 45 46; CC tam 47 48 53 61-65; CI tame 67, 83 84; NA teme 89 90.

192. *hungry*

*toa, *yor
CA to 1 5 7 14 15, 29, 35 37, 43; CI tuá 67.
CC yor 47 48 61; MO or.

193. *husband*

*-omo(-piT), *-miwis(i)
CA -mo 14 15 25, 29; -mipic 1 7; -mowir 35; -mu 27; -umu 28; CC -mo 61; -ome 47 48;
CI -mo 67.
CA miwis 7 14 15; SE miwihi.

Cf. MO ombo, umb *husband*. <-pic> is a bound morpheme meaning *male*. <-miwis> is the plural with <-mo>.

194. *I*

*nor

CA nor 1 7 14 15 27, 39, 42; ner 29 30, 35 37; ne 43; CC nor 47; ner 61; CI dör 67; NA ne 89 90.

195. *(the) inside*

*amane

CA aman 7 14 15 26 28; amen 35; amane 37; CC aman 61 62; CI aman 67.

196. *intestines*

*asow

CA asow 14; KA atoare.

197. *ironwood*

*posa

CA pas 1 7 14 15 26 28; pase 36 37; pos 42; CC pos 47 48 61; CI posa 67.

Cf. SE poha, KA pota *ironwood*.

198. *itch*

*pases

CA pases 1 14 15; pasis 7, 39; pesis 35; SE payhi; KA pateta.

The KA form is glossed *kind of scabies*.

199. *jaw*

*wokone, *topane

CA okon 1-18 22 24 26-28, 32, 43 45 46; okone 29-31, 35-37 39; CI okon 67, 83 84; NA oka 86; wakane 89; wokone 90; okone 93. CC topane 48 65; topon 61; KA kepare.

The KA form is glossed *chin, jaw*.

200. *Job's tears seeds*

*tesan

CA tisan 5 7; tisen 14 15 26 28; tisun 27; tasan 1; CI tesan 83; NA tisin 89.

201. *to join, accompany*

*kapu-

CA kapu- 7 14 15; SE kapo-; KA kapu-.

The SE and KA forms are glossed *to follow*.

202. *joint*

*komane

CA koman 3-7 26 27; komon 24 28; kuman 1; kumin 14-16; komane 29 31; komne 35; kome 39;

CC koman 61; CI koman 67; NA kome 89.
When preceded by *foot: ankle* (14: may kumin), when preceded by *hand: wrist* (14: man kumin). See also *knee*, no. 208, and *fire tongs*, no. 137.

203. *to jump up* *sopi(p)-
CA sopi- 7 14 15, 35 37; CC sopip- 61.
A compound verb stem of *sow- *jump* and *pi- *fly* (no. 147).

204. *just, only* *nesen
CA nesen 7 14 15; SE nahana; KA natare.
All these forms also mean *in vain, empty-handed.*

205. *to kill* *Ta-
CA ca- 7 14 15; ta- 29, 35; te- 37; SE ta-.

206. *to kill* *sonáo em-
CA sanáo em- 7; sonow em- 14 15; SE hanáo eme-; KA tanáo imi-.
To kill somebody of one's own group.

207. *to kill* *toaf-
CA toaf- 1; towof- 7 14 15; SE tafo-; KA kao-, kafo-.
The CA forms mean *to kill, beat (pl. object)*; the SE and KA forms are glossed *hit, beat.*

208. *knee* *yina
CA yina 1-5 14-17 22 24 26 28, 35-37 39; yine 7 27, 29, 43-46; yini 31-34; CC yine 48 61; yin koman 62; yin okot 65; ini 53; CI zini 67; yini 83; yina 84; NA yina 90; yine 93; yini 89.
For koman see no. 202 *joint*; for okot see below, no. 209.

209. *knot in wood* *okoTo
CA okoc 7; ekco 14 15; okor 35; CC okote 50; okot 65.

210. *knowledge* *masom(o)
CA -misom 7; -msom 14 15; SE mahamo; KA matamo.
In CA always preceded by a pronoun: 14: no-msom *I know*, o-msom *you know* etc.

211. *language, speech*

*atakom, *atamo

CA atakam 1 7 14 15 27; atokom 29; arakam 35 37 39, 43; arakom 37; CI atakom 67.
CC atam 47 48 61; atamo 53; SE atamo.

All forms contain a root at or ata. Thus 14: at- *to say*, atayi *instruction*. Cognates of this root are found in KA akwere (ak-were) *speech* and IR aga-ra *voice*.

212. *to laugh*

*wuTi woTi-

CA uc oc- 7 14 15 28; uci oc- 1; wuti wot- 29; wiri wir- 35 37 43; CC ut ot- 61; ute- 53; CI ütü ütü-.

Cf. SE ote oto-, KA oko ko- *to laugh*.

213. *leaf*

*ee

CA ee 7; e 14 15 24 27; eá 1 5; ey 29; CC ee 61 62; ye 47 48 50 53; NA eá 93; yi 89.

214. *leech*

*Ti

CA ci 7 14 15 28; ti 29 35; CC ti 61; CI ti 67.

215. *left side*

*tamo

CA tamo 7 14 15 18, 39; tama 35 37; CC tama 47.

216. *to lie down*

*ames-

CA ames- 7 14 15, 29; amis- 14 15, 35; CC ames- 61; amis- 62; CI amos- 67.

14 15 ames-, amis- are allomorphs. SE has mehe- *to lie down*.

217. *light (not dark)*

*sareT/saroT

CA sere 7; serec, seric 14, 15; seret 28; sare 29; saro 35; CC serot 61.

Cf. SE hereto *reddish, of hair* (that is, light coloured in comparison with the usual dark hair). The presence of forms without final consonant suggests that it was a separate morpheme. Since all other evidence points to a form *-to (see 6.2) we have to assume that KW /c/ in this word developed from /t/ after the preceding vowel was raised to /i/.

218. *lightning* *(masa-)maro
CA mer 7 14 15, 29; mar 22; CC masamaro 48; masamer 61; CI ba 67.
Cf. SE maaro *lightning*. masa could not be identified.

219. *lightning* *warakay
CA warak 14 15; werak 35 37; waak 39; warkay 7; KA uraki.
warak and warkay mean *sheet lightning*; the KN cognates all mean *lightning*; the KA cognate means *thunder*.

220. *lime* *mi
CA mi 7 14 15 24 25 27 28, 34, 36; CC mi 47 53.

221. *lip* *iwene
CA ewen 7 14-17 22 24 27 28; iwini 39; ipni 35 37; e 1, 29; ünü 31; CC ene 62; ine 48 65; yene 61; NA yine 89.
Note the loss of the intervocalic /w/ in several forms and in addition the loss of ne in 1 and 29. Here again we have an element ne which appears and disappears as if it was a separate morpheme, see 6.2 and no. 20. SE has iwini, KA has iiri, and IR has forms without this element but combined with a morpheme meaning *skin*: i-hura, ivu-fura, iw-hura, ivu-hura.
The form ipni is interesting because it must have developed from an earlier form iwni. That is, the penultimate vowel must have been lost in 35 and 37 before intervocalic /w/ was dropped. The fact that /p/ developed a voiced fricative allophone in intervocalic position ([w, ƀ]) may have led to the shift of /w/ to /p/.

222. *lively, busy* *tetakay/tatakay
CA tetakay 7; tatakay 14 15; tetaka 29; teraka 35; CC tatakay 61.

223. *liver*

*wao

CA wa 7 14 15; wo 29, 35; CC wa 61; CI wo 67.

Cf. SE wawa, KA wao *liver*.

224. *loins*

*asa(e)-maka

CA asa 1, 37; ase 7 14 15; asamak 3 5; asemak 16 22 24 27 28; CC asemak 48; asəmaka 53; NA asmak 89.

-mak, -maka can have two sources; *bone*, or *back*, nos. 46, 23; note that the KA cognate, atae means *back of body*.

225. *loin cover*

*awere

CA awer 7 14–16 26–28; awar 1; aere 35 36; ae 38; CC ayer 47 48 65; NA aere 89.

Loin cover made of young sago leaves; used by married women.

226. *long*

*yurao

CA yuruw 14–16 24 28; yurow 7; yəro 1; yuro 35 37; yirao 29; yoa 39; yao 43; CC yüro 47; yirao 61; iraw 53.

Cf. SE irawo-ko *long*.

227. *to look*

*por-

CA por- 1 7 14 15 28, 29; per- 35; po- 43; CC por- 47 53 61; CI por- 67.

Cf. SE pora-, KA poro-, IR bora- *to look*.

228. *to look for*

*powa-/pawo-

CA pow- 7 14 15; poo 1, 35; pa 29; CC powa- 47; pow- 61.

Cf. SE, KA pao- *to look for*.

229. *louse*

*wamo

CA womo 35 39; wom 1 7 14 15; wam 28; wamo 29; CC wamo 47 48 61; CI wamo 67.

230. *low, below*

*Tenes

CA cenes 7 14 15; SE tanaha.

231. *to make thatch*

*fe-

CA fe- 1 7 14 15, 37, 43. SE fe-.

232. *man* *yipiTi
CA yipic 1 5 7 14 15 22 26 28; yipit 29 32, 45 46; yipir 35-37, 42 43; CC yipit 61 62; ipit 47 48 53; CI ipit 67, 83; ipiti 84; NA yipir 90; ipir 89.

233. *mangrove* *paw(e)
CA paw 7 14 15; SE pawe; KA paé, pawa.

234. *many* *arke
CA arke 7 14 15 24, 29; CI arke 67.

235. *mat* *tapini
CA tapin 1 7 14-16 18 22 24-28, 42; tapini 29; tepen 5; tepin 40; tipni 35 37; tipini 39; CC tapin 47 61 65; tapini 48; CI tapin 67; NA tapəne 89.
Sleeping mat made out of pandanus leaves.

236. *midday, noon* *yoka
CA yok 1 7 14 15 22 25 28, 35 37 39, 43; CC yok 48; yoko 47; yuka 53.
Cf. SE yoka *midday.*

237. *midrib* *po
CA po 7 14 15; SE po; KA po.
Especially the broad bottom part of the midrib of a sago frond.

238. *moon* *pira
CA pir 1 7 14 15 17 18 22 24 27 28, 29 30 34, 35; pira 36 37; pii 39; CC pir 61; pira 47 48 53; CI pira 67; NA pi 89.

239. *morning* *tama
CA tam 1 7 14 15 22 24 28, 35 37 38; tom 29; taham 43; CC tam 61; tama 47 48 53; CI tam 67.
taham could have developed from *tafam or *tasam, see 7.4.2, 7.4.3 but there is no supporting evidence for intervocalic *f or *s in this word. However, taham could also be a metathesis form of tamah(e), from *tamas, cf. SE tameha *morning.*

240. *mosquito* *isi
CA is 14 15 28; isi 1 7, 29; CC isi 47 48 53 61; CI isi 67.

241. *mother* *wos-awoT, *wose
CA -osooc 1 5; -osowuc 7; -oswuc 14 15; asoot 29; -sor 35 37; -soor 39; -os 39; -wos 25 26 28; CC -os 61; CI -esaot 67; NA -wose 89.
Both proto-forms could have existed side by side in *PA. *-awoT (KW -awuc, -awoc) was a morpheme meaning *female*, the bound form of *tawota *woman*, no. 415. I assume that in the compound forms the initial *w was dropped. SE has wehe, KA has ote *mother*.

242. *mother* *enewa
CA enew 7 14 15 21 24 28; ene 1; CC enew 47; ena 48 61.
In 7 14 15: term of address as well as term of reference. Cf. SE enay (address), KA enea (address).

243. *mouse* *piraw(to)
CA per 14 15 26 28; pero 7; paro 35; piro 5; pirao 29; CC parot 47; perato 48; peros 61; CI piraw 67.
For *(to) see 6.2. The final /s/ in 61 is irregular. The CI form is glossed *rat*.

244. *mouth* *mea
CA me 5 7 14-17 22 24 26 28, 29; ma 1 3, 34; mea 30 31; mia 35-37 39; CC me 53 61; mea 62 65; CI be 67; NA mafa 89 90 93.
There is no evidence for intervocalic /f/ in other languages of the family (SE mea, KA me *mouth*); mafa could be a contraction of *mea and *yofa *hole, opening* (no. 187). In all CA dialects <yof> optionally follows <me>.

245. *movement* *ya
CA ya 1 14 15, 35 36; CC ya 47 62; NA ya 89.
Movement from one place to another; thus 14: *water movement, current*.

246. *nasal mucus* *mi-ta

CA mita 1 14-17; mite 22 27 28, 29, 43; miti 7; mira 35 39; CC mita 48; miti 65; mit 61 62; CI miti 67.

An old compound of *mi *nose* (no. 260) and an unidentified morpheme *ta (?) perhaps related to KW 14 ca *sap, sperm.*

247. *murder* *sonao

CA sonow 14 15; sanao 7; KA tanao.

sonow, sanao mean *deliberate killing of somebody with whom one has ties of kinship or friendship.*

248. *nail* *fiTi

CA fic 7 14-17 27 28; fici 1; firi 37; CC fit 61 62; fiti 65; fiki 48 53; CI fiti 67; NA fit 86; fire 89 90 93.

fiki is irregular, see 6.2, 7.4.5, footnote 50. KN has aberrant forms: faro 35 37; fatu 36; fato 39.

249. *name* *yuwas

CA yuas 7, 32, 39; yuwus 14 15; yoos 35 37; yos 45; CC yuas 61; CI zues 67; yuas 84.

Cf. SE iwahe *name*. KA has u-nata, IR u-ra suggesting that the *PA form was bi-morphemic: *yuw-as.

250. *narrow* *kiki

CA kiki 7 14 15; KA kekere.

Close together, narrow.

251. *navel* *mokoper, *mopere

CA mokoper 1 3 7 14-16 18 22 24 26-28, 29 34, 35 36; mokper 3, 37; mokope 39, 43; mokape 46; mokopir 32; mope 45; CC mokopet 48 61; mokopot 65; CI bököpör 67; NA mepere 93; meper 86; mepe 89 90.

Cognates in SE and KA lack intervocalic /k/: SE mepere, KA mopere. See the similar case of *language*, no. 211.

252. *neck, throat* *femak/fomak

CA fomak 7; fəmak 17 24; famak 16; femak 14 15; fimak 31; femuk 32, 45 46; CI famak 83; NA fəmak 89.

Most of the cognates elsewhere lack the /k/, which perhaps is a remnant of a suffix -ke (see 6.2), cf. SE homa, KA ema, imak, umi, umeke, IR homa-ra *neck*, and also CA 14 fem-fu *adam's apple* (14 fu is also found in yina-fu *knee-cap*).

253. *nest* *Towa/Tawa

CA co 7 14 15 28; to 35 37 29; CC tawa 61; CI to 67.

Cf. SE tao, KA kao *nest*.

254. *nettle leaves* *aTuw(i)

CA acuw 14 15; acu 7; SE atiwi; KA aki.

255. *new* *ayi

CA ay 7 14 15 24 28, 35-37 39, 43; ayi 1 5; CC ay 47; ayi 61; CI ai 67; NA ayas 89.

The form ayas was also noted in KN 35 and 37 beside ay; their relationship is still unclear to me (see fn. 52, p. 51). The SE form links up with ayas: ayha. IR has a cognate of ayi: ai-ra *new*.

256. *night* *yirama

CA eram 1 7; erem 14 15 22 24 28; yiram 29, 35 37; yiam 39; yam 38, 43; CC irima 53; yirima 47 48 61.

CI has zutam from züüt *dark* (no. 97) and an unidentified (t)am. Cf. SE irama *night*, and KA iri which occurs only in compounds, as in iri-wawku *middle of the night*. Possibly both *yirama and zutam contain a morpheme meaning *dark* (*yiri, zut) and a morpheme meaning *time of the day* (am, ama). The latter would then be a possible cognate of Telefol (Ok language Family) am *day, time*. Interesting is that one of the easternmost languages of the CSNG stock, Fasu (in the Southern Highlands

of Papua New Guinea) has a possible cognate which is very similar to the Asmat forms: ereamo *night*.

257. *nipa fruit*

*tase, *miwi
CA tas 7; tes 14 15; tase 37; CC tase 65; SE taha. CA miw 7 14 15; mii 37; CC mi 65.
<tas> is the full-grown fruit of the nipa palm; <miw> the young fruit of the same palm.

258. *nipa palm*

*akamo
CA akam 1 7 14 15 29; akamo 35; akmo 37; CC akam 47 48 61 65.

259. *nipple*

*aw men(e)
CA aw men 7 14 15; KA ao mare.

260. *nose*

*mi(-mak)
CA mi 1-17 22 24 27 28, 37; mimak 29 31 34, 35 37, 43 45; mimuk 32, 46; CC mimak 48 61 62 65.
*-mak: perhaps the same morpheme as found in *ear* and *eye* (nos. 115, 128).

261. *not*

*wopak, *min(a)
CA opak 14 15, 43; opok 1 7, 37; wap 29; CC opak 47; wapak 61 62.
CA min 14 15; SE mona; KA mina.
min is a relic form which I noted only a few times in traditional texts, and in the word nesmin, see *empty*, no. 123.

262. *old*

*tarey, *akamat
CA tarey 7 26; tare 1, 29; tari 14 15, 35; tiri 36 37; taí 43; CC tarey 47 61.
CA akmat 14 15; akamat 7; akamer 35; CC akmat 61.
*tarey: *old, of objects*; *akamat: *old, of people*. Cf. SE taraiha, KA akarawte, IR garu-ra *old*.

263. *on top of*

*ton(e)
CA ton 7; ten 14 15; SE tone.

264. *one*

*Towaka
CA cowak 14 15 24 27; cowok 7 26; take 29 32; toko 35 37 39; CC tak 48 61; CI taka 67.

265. *to give an order*

*yirimec yirim-
CA yirmec yirim- 7; yirmuc yirim- 14; yirmer yirim- 35; yirim yirim- 29;
CC yirmet yirim- 61; CI zirim zirim- 67.

266. *orphan*

*manema
CA manma 7, 35 37; munma 14 15; manema 29;
CC manma 48 61.
Cf. SE manima tiwi *orphan boy*.

267. *(an)other*

*wen
CA wun 7 14 15; wen 37; SE weni.

268. *outside*

*Tasane
CA cesen 1 14 15; tasene 29; tesen 35;
CC tasen 61; CI tasan 67.

269. *owner*

*amat(o)
CA amat 7 14 15; SE mato; KA amako.

270 *paddle*

*po
CA po 1-15 18 24-28, 29 31, 35 37-39, 43;
pu 45 46; CC po 61 65; CI pu 67, 83 84.

271. *pain(ful)*

*asosak
CA asesak 7 14 15; asesa 29; asesok 35;
CC asesak 61; CI asös 67.

272. *red paint*

*wasa
CA wase 1 7 14 15 27 28, 42; wasi 24 25;
wasa 36 37; CC wase 47 48 53; NA wasa 90.
Paint made of red clay. Cf. SE waha,
KA watae *red earth*.

273. *palm cabbage*

*wúi
CA wu 1 14 15 25-28, 39; wi 7, 31, 37;
CC wu 47; CI üü 67.
Cf. KA wia *palm cabbage*.

274. *parrot*

*mewor
CA mewor 7 14 15; meor 37; mowor 28;
CC mööro; NA mo.
Red parrot. The name probably meant *the bright one*, cf. SE máoro *bright, clear*, and CA 14 mewor *bright star*, no. 355.

275. *path*

*matot
CC matot 62; SE moto; KA mako.

276. *pawpaw*

*sen(a)
CA sen 7 14 15; SE hena; KA tena.

277. *penis*

*Tamane
CA cəmen 7 14-16 18 22 24 26-28; cəman 1-5; tamane 29 34; taman 32; tame 39; tamen 43 45 46; tamne 35-37; CC tamene 48 61 65; CI taman 67, 83 84; NA temena 93; somənə 89.

278. *people*

*owe
CA ow 7 14 15 28; owe 32; uú 35-37;
CC owe 47; CI áo 83.
Cf. SE owe, KA we *people*.

279. *person*

*kawey
CA kawey 7; kawi 14 15; kae 29; kee 37;
CC kawey; CI kaü.
kaü means *person*. In CA this word refers to *others, strangers, people not belonging to one's own group*. Combined with nak *true, real* it refers to carved wooden figures of people: kawenak, etc. I cannot subscribe to Drabbe's interpretation of this compound (1963, p. 3) as meaning *true human being*. Rather it would mean *real stranger* or better *person of a really different order*, and since in the Asmat carved human figures always represent the dead, that is what they are.

280. *pig*

*ofo
CA o 1 7 14 15 25-28, 42; wo 29 30 32, 35-37 39; oo 45 46; CC wo 47 50 53 61; wu 65;

oo 48 53; CI uú 67; owu 83; NA ofo 89 90.
Intervocalic /f/ is attested in SE and KA as well: SE ofo, KA oo, oho, ofo, but IR o-ka, MO u *pig*.

281. *pigeon* *pari
CA pari 7 14; KA parua.

282. *to plait* *si-
CA si- 1 7 14 15, 29, 35 37; CC si- 61; CI si- 67.

283. *plank* *Tu-pa
CA cupa 14 15; cipe 7; tipa 42; pa 35; CC tupa 50; tup 65.
Piece of the side of an old canoe (*Tiú no. 62). CA <pa> means *a thin, flat, slightly curved object*, e.g. fish scales, buttresses.

284. *to plant* *pom(o)-
CA pom- 7 14 15; SE pomo-; KA peme-.

285. *platform* *aTir(i)
CA acir 7 14 15; KA akiri.

286. *power* *tas(a)
CA tes 14 15; ces 7; SE taha; KA kata.
Innate power, mana.

287. *prawn sp.* *me
CA me 1 7 14 15 28, 35-37 39, 42; CC me 47 48 61 62 65; CI be 67.

288. *prawn sp.* *sisi
CA sisi 1 7 14 15 28; sis 36 37 39; CC sis 47 48 65.

289. *to pull* *yim-
CA yim- 7 14 15, 35 37; SE imi-; KA iimi-.

290. *pulp of sago* *apim(i)
CA apim 7 14; KA apimi.

291. *rack* — *makanamo
CA makanam 1 5 7 14-16 27 28, 32; makamo 37; makamas 39; CC makənəmu 61 62; NA makanam 89.
Rack over the fire place, used to store firewood or to put fish or meat for smoking.

292. *rain* — *te(e)
CA te 1 7 14 15 17 18 22 24 25 28, 29, 35-39; CC te 47 53 61 62 65; tee 48; CI te 67.

293. *rainbow* — *yir(i)
CA yir 7 14 15; KA iri.

294. *rattan* — *tama/tema
CA tem 1 7 14 15, 29 34, 35 37, 42 43; tam 18 27 28; CC tema 61 62; tam 65; NA temo 90.

295. *raw* — *naTi
CA naci 7; nati 29; nec 14 15; nir 35; CC nati 61; CI dati 67.

296. *red* — *esakam, *esese
CA esakam 7 22 27 28, 29 34, 35 37; eskam 14 15; CC esakam 48; eskam 47; isakam 61. CI esese 67; NA eses 89.
Both proto-forms contain the morpheme *ese *blood*; the other constituent(s) could not be identified.

297. *revenge, retaliation* — *miTi
CA mic 7 14 15; miti 29; miri 35; CC mit 61; CI biti 67.

298. *rib* — *yawimi (emake)
CA yawim 14 15 24; yewim 18 28; yewem 7; yaim 1; yaemi 29; yeim 43; yima 35; yimi 37 39; CC yaim 48; yayem 61; yayme 65; CI zamim emak 67; NA yimako 89.
14 15 yawim means *side of chest*. In 67 and 89 it has been combined or compounded with *emake *bone*.

299. *ripe* *piwi
CA piwi 7 14 15 22 28; pií 1, 29, 35; pü 43; CC pi 61; CI püü 67.

300. *river* *yoa(k)
CA yo 1 7 14 15 18 22 24 26 28; yu 29 30 32 34, 36 39, 42; yuk 38; yi 35 37; CC yoa 47 48 53 62; yua 47 61; CI zu 67; zi 84.
Cf. SE, KA yo; IR yogə-ra *river*.

301. *root* *mimi
CA mimi 1 4 14 15 24 26 28, 34, 35 36; mim 42; CC mimi 50 53 61 62.
Small roots like those of bamboo and palm trees. Cf. SE mimi, KA mumu *root*.

302. *root* *tamowo
CA tamow 7 26; tamo 1, 30 34; tamuw 14 15; tamóo 29; tomu 35; tumu 36 37; tamu 39, 42; CC tamaó 61; tamawo 62; tama 47 48 50 65; CI tamam 67.
Large roots, buttresses.

303. *rope* *somane
CA somen 1 7; səmen 14 15 26-28; sumnu 35; CC səmen 47 48; soman 62; somane 65; CI siman 83; simen 84.

304. *rotten* *ofa(k)
CA of 7 14 15; ofo 35 37; ofak 43; IR oho-ra.
The IR form means *soft*.

305. *to rub* *aram(e)-
CA aram- 7 14; SE areme-.

306. *sago* *amosa
CA amos 1 5 7 24 27 28, 29 32, 39, 42-46; amas 14 15 25 26; ames 35 37; CC amos, amse 61; amosa 47 48 50 65; CI amos 67; ames 83; amus 84; NA amos 89; amse 93.

307. *sago grub* *tow
CA tow 7 14 15 23 27; taw 28; to 5; too 37; tuu 36 39; CC to 61 62; too 47 48 53.

308. *sago leaf* *yunumu
CA yunum 7 26; yinum 14 15; NA yənum 86; yünmu 89.
Young side leaf of a sago palm frond.
Cf. SE inimo *young palm leaf.*

309. *sago palm* *Tawo/Towo
CA cau 1; caw 24 27; cow 7 14 15 27 28; taa 35 37; ta 36; təwa 39; CC tao 50; to 47 48; NA too 93.

310. *sago pith* *yi
CA yi 14 15, 35 37 39; CC yi 47 48.
Sweet sago pith.

311. *sago trough* *wane
CA an 5 7 14 15 22 26 27; NA wane 89 90.

312. *saliva* *masap
CA mesap 1 3; mesep 14-17 22 27 28, 35-37 39, 42; mesa 5, 29; mese 7; CC masa 61; maso 62 65; NA mesip 89.
The proto-form probably was bi-morphemic: *masa-pi, cf. SE mahapi, KA matao, IR masa-ka, MO mitaw. *pi may have meant *excrete, excretion*; in KW we find as pi- *defecate*, i pi- *urinate*; capi *milky sap of trees, semen* (no. 325).

313. *salty* *yeme
CA yema 7; yeme 14 15; KA yame.

314. *sand* *misini
CA misin 1 7 14 15 24, 29 34, 35; misun 22; misün 37; CC misini 47 48 61; CI bisin 67.
Probably a compound of *mui *water* and *sini *sand*; cf. SE hini, KA tiri, MO sir *sand*. 14 15 misin means *beach, sand banks off shore.*

315. *tree sap* *Tapi
CA capi 7 14 15; KA kapi.
Sticky, milky sap of certain trees.

316. *sawfish*

*sawote

CA sowot 7 14 15; CC sawat 47 48; sáote 65; NA soór 89.

Cf. KA tawake *sawfish*.

317. *scale of fish*

*pa

CA pa 7 14 15; SE, KA pa.

CA pa denotes a slightly curved, thin and flat object, see *plank* no. 283. Thus, emen-pa is a deformed crooked shin (cf. no. 326), enam pa *scale of fish*.

318. *sea-side, West*

*piri

CA piri 7 14 15; CC piri 47 48; pir 61 62.

Cf. SE piri *tidal forest*, KA puru *the sea*.

319. *secretly*

*Tiruw(a)

CA curuw 7 14 15; CI türü 67; SE tiriwa.

320. *shadow*

*yipuru

CA yipir 7 14 15; CC yuparu 65; CI zip r 67.

Cf. SE ipi, KA ipu *shadow*.

321. *shaft of arrow*

*fira(k)

CA fir 1 7 14 15 27 28; fira 3; fií 39; fi 43; CC fira 47 50 61; firak 65; NA fií 89 90.

<fir> is also the name of the reeds used to make arrow shafts.

322. *shallow*

*sara

CA sar 1 7 28; sara 39; ser 14 15; CC sara 62.

323. *sharp*

*faro(t)

CA fero 14 15; foro 7; fere 35 37; CC faro 61; farot 47; CI faro 67.

Sharp, of edge or point; also *light, fast, of a canoe*. Cf. SE feroko *sharp*. For the final /t/ in CC 47 see 6.2.

324. *shell of coconut*

*upuí

CA upu 7 14 15, 35-37 39; NA ipi 89.

Cf. KA tir-apu *coconut shell*.

325. *shield*

*yemese

CA yemes 7 14 16 18 22 24 26-28; CC yemes 53; NA yemse 89 90.

Cf. SE yamahe *shield*.

326. *shin*

*emin(-mak), *yimori

CA emenmak 1-17 22 24 26-28, 31; emin 43; emimak 36; CC emen 48 65.

CI zimori 67; NA yimori 93; yimae 90.

In KW and KN emen forms a compound with *bone*, no. 46.

327. *short*

*fanip

CA fanip 24 28; faninakap 1; fanenakap 14 15; fayenakap 16; fano 7; CC fanip 47 53 61; CI fakup 67.

KW -nakap is a suffix which in this case accentuates the idea of shortness (see Voorhoeve 1965:138).

328. *shoulder*

*sayi

CA sayi 45; saya 34; sey 7 14 15 18 22 24 26 28; sikop 35 37; sitemo 39; CC se 53.

Cf. SE hiari, KA tairi. sikop and sitemo seem to be compounds of si (< *sayi) and unidentified other morphemes. Possibly kop < *kape *armpit*, no. 16.

329. *shoulder-blade*

*pema

CA pemo 14-18 26 28, 32; poma 1; pama 37; CI pema 67.

330. *sick*

*namo

CA nam 1 7 14-16 22 24 28, 29, 43; namo 39; nomo 35-37; CC nam 47 61 62; namu 53; CI damo 67.

331. *side*

*poman

CA poman 1 7 14 15 24 28, 37 39, 42; CC kárapman, érapman 61 62.

Cf. SE pamane *the other side*; in 14 15 poman means *the other side, side, part of*

something. kárapman means *this side*, érapman *that side*.

332. *similar* *inim(i)
CA inim 7 14 15; SE inim; KA imiri.

333. *sister* *-ipiTa/-upiTa
CA -ipic 1 7; -epic 14 15 22; -upic 24 28; -ipit 29 30; -ipir 35; -pir 43; CC -ipit 61; CI -upita 67; NA -ipiri 89.
Elder sister, term of reference.

334. *sister* *-omosi
CA -omas 1; -omos 22 24; -amos 27; -omes 7; -omus 14 15 28; -emsi 35 36; -imsi 37; CC -mas 61; CI -masi 67; NA -masi 86; -mus 89.
Younger sister, term of reference.

335. *to sit* *ape-, *yape-
CA ap-, yap- 14 15; ap- 1 7 28, 35-37 39; yap- 43; CC ap- 61; ape- 48 61 65; CI ap- 67; NA ap- 86 89.
14 15 ap- and yap- are allomorphs. Cf. SE ape- *to sit*.

336. *skin* *piTini
CA picin 1 7 14-17 22 27 28; pitin 29-34; pitni 35-37; piti 39; pirin 42 45 46; CC pitin 47 53 61-65; CI pitin 67; pitn 83 84; NA pitn 86 89 90 93.

337. *skinny* *faTo(kot)
CA faco 7 24 28; foco 14 15; fato 29; foro 35, CC fatokot 61; CI fato 67.
For -kot, see section 6.2.

338. *sky* *wonamo
CA onam 1 7 14 15 17 18; onom 24 27 28; wonamo 29; wanamo 34; wanam 42; wenem 35 36; wonom 37; wonomo 39; CC onam 47 61; onom 48 65; onamo 53; NA wonom 86; onomo 93.

339. *sleep, to sleep*

*esi, *esi es-
CA isi 1 7, 35 37 39; esi 32, 36; ese 29; is 14 15 28; 43 45 46; CC is 47 61 62; CI ese 67; isi 83; NA isi 89.
When combined with the verb stem es- : *to sleep*, isi es- etc.

340. *slippery*

*yuTo(t)
CA yico 14 15 28; yucu 7; yuto 29; yuru 35; yuro 37; yiro 43; CC yütüt 61; CI zürü 67.
Cf. SE ititi ko *slippery*. For the final /t/ in the CC form, see 6.2.

341. *slow(ly)*

*names(e)
CA names 7 14 15; SE namehe.

342. *smell*

*pinum
CA pinim 7 14 15, 29, 35 37; pinum 43; CC pinim 61; pinum 47; CI pinim 67.

343. *smoke*

*yis-amini/amuni
CA yisamun 1 5 7 14 15 24, 29 30, 35 36; isamun 27; yisamin 16, 30, 43; isamin 25 26 28; yisamen 37; isamn 37; yisam 38; isaman 39; CC isamun 47 48; yisamin 61; isamin 65; CI isa amun 67; NA yis amnu 89 90.
A compound of *yusa *fire(wood)*, no. 138, and *amini/amuni. In 7 14 15 amun by itself means *haze, damp*. Its cognates in SE (amini) and in IR (amunia) are glossed *smoke*.

344. *snake*

*amer
CA amer 1 7 14 15 28, 29, 35 36; amernak 37; ame 39; CC amerto 47 48 61; CI amer 67.
amernak is the name of a ringed water snake in 14, 15 and this form in 37 almost certainly refers to the same kind of snake and is not the generic term. In amerto we again find an element -to which could be an old suffix, see 6.2

345. *snake sp.* *miniw
CA miniw 7 14 15; mini 1, 36 37 39; CC mini 61; münü 47 48; CI binu 67.
Python. Cf. SE menewe *snake sp.*

346. *snake sp.* *pitu
CA pit 1 7 14 15; piru 36 37; CC pit 47; put 61; CI pitu 67.
Large ringed tree-snake.

347. *soft* *komiti
CA kumit 7 14 15, 29; kumiri 35; kumir 43; CI komet 67.

348. *son* *tiwi
CA tiw 7 14 15 22 24-26 28; tii 37; tüü 29; tü 45; tu 46; CC tii 48 62; CI tüü 67.

349. *song* *so
CA so 7 14 15, 29 32, 35 37, 46; CC so 47 48; CI so 67.

350. *spear* *woTane
CA ocan 1 7 26; ocen 14-16 22 24 25 27 28; wotan 29; woten 31; waren 39, 42; wetn 35 37; CC otan 61; otene 48; wetene 62; CI otan 67; NA watne 90.

351. *to split, cleave* *terem-
CA 7 14 15; SE tereme-.

352. *to stab* *faw-
CA faw- 7 14 15 28; CC fa- 61.
To stab repeatedly in 14 15. A SE cognate is perhaps fo- *to drill a hole.*

353. *to stand* *em-
CA em- 7 14 15, 29, 36; am- 35; CC im- 61; CI em- 67.

354. *star* *mawito
CA mawit 14 15 22 24 27 28; maít 1 7, 34; maét 30; mayüt 29; CC máito 47; máeto 53 61.

355. *star*

*ma(i)wor

CA mawar 1; mewor 14 15; mewer 24;
CI baÿ̆a; NA mor 90.

Bright star, morning star. Reconstruction of (i) is based on the assumption that CI ÿ̆ developed from *iw, see 7.4.9. A semantically and formally related form is *mewor *red parrot*, no. 274.

356. *star*

*mak

CA mak 14 15, 35-39; SE maake.

In 14 15, mak means *spark, glowing embers*; in 35-39 it means *star*. The probable cognate in Sempan means *bright, shining*. *mak is also found as the second constituent in *fire*, no. 135.

357. *to steal*

*wosom-

CA osom- 7 14 15; wasem- 37; SE ohomo-;
KA otomo-.

358. *stone*

*yeka

CA ek 1 7 14 15 22 24 26 27, 45; eka 29, 37; ika 32; eke 35; CC eke 47 48; CI eka 67; yeka 83; NA yeke 89.

Note the formal similarity to *fruit*, no. 155. In many Asmat varieties *stone* and *fruit* are homonyms. The sister languages all have different forms for *stone* and *fruit*: SE yaka *stone*, eke *fruit*; KA eke *grain, small stone*, omani *stone*; IR eterə *stone*, ekerə *fruit*.

359. *straight*

*emetow

CA omtow 14 15; emtow 7 28; emero 37; emer 35; CC emeret 61.

7 14 15: *In a straight line directly overhead or directly across (e.g. on the opposite bank of a river).* For final /t/ in 61, see 6.2. The CC form is irregular, having -r- instead of -t-; cf. *wet*, no. 407.

360. *to straighten* *orom-
CA orom- 7 14 15; KA oro oromo-.
In CA also: *smoothen, polish, stroke (with hand).*

361. *sun* *yowe/yowi
CA yow 7 14 15; yoo 35; yoe 29 30;
yo cənam 1; CI zaw tanam.
Cf. SE yowi, KA yaw, MO dzowa *sun.*
yo cənam probably refers to the ball shape of the sun, see no. 82 *contents.*

362. *sunlight* *yo-poke
CA yopeke 18; yopaka 24 28; yopoka 22;
yopoke 14 15; yopok 7; yepaka 36;
SE peke-.
The SE form means *to shine.*

363. *to swim* *TiTu-
CA cucu- 7; cici- 1; tütü- 29; tu- 37 39;
ti- 43; CC tütu- 61.

364. *tail* *epe(-mak), *mepe(-mak)
CA ep 7 14 15 25 26; epe 1; epmak 35 37;
epemak 34; CI epmak 67.
CC mepe 47 48; mepmak 65; NA mepe 89; mep 90.
*-mak probably is a morpheme meaning *bone,* see no. 46. In 14 15, epmak refers to the upper course of a river. *mepe has cognates in SE (mepe) and KA (mipi) *tail.*

365. *to take* *tew-
CA tew- 7 14 15 28; teer- 39; ter 35 37;
tae- 29; te- 43; CC ter- 47; tew- 61.
To take something (sg. object). The KN forms teer, ter are contractions of tew-er which corresponds to KW tew-et *to take something for oneself.* CC ter is a contraction of tew-er corresponding to KW tew-er *to take something (not especially for oneself).* Cf. SE tewa-, KA kewa- *to take.*

366. *to tear, get loose*

*kay-
CA kay- 7 14 51; SE kay-; KA kay-.

367. *testicle*

*misaka
CA misak 1-16 18 22 24 26-28, 29 32, 35 37 39, 45 46; CC misaka 48 61 65; CI bisak 67, 83; NA misak 89.

An old compound of *misa which probably meant *full-grown testicles* and *eake *fruit* (no. 155), cf. 14 15 mis fin *pubic hair of men*, misa-tiw *grown-up boy, bachelor*. KA has muta or mutáeke *testicle*.

368. *thatch*

*wonewe
CA onow 14-16 18 22 28; onew 7 24 26-28; one 1 5; wene 35-37 39; wane 40, 43; wanü 42; wone 34; wanöe 29; CC onowe 47; wene 61-65; one 53; CI one 67; NA wene 86; wane 89 90.

369. *thigh*

*ae(ya)
CA eá 1, 31; iá 3 5; eé 29 32; áa 45 46; a 14-17 22 23 26-28. 43; e 7; emak 35-37; CC áe 53 61 65; aya 48; CI ae 67; aiye 83; NA ae 86 89 90; ayiá 93.

Cf. SE, KA ae *thigh*. 35-37 emak probably is a compound of e *thigh* and emak *bone*.

370. *to think*

*minip pum-
CA minip pim- 7; minip pum- 14 15; SE mipo popom-; KA mipi popo-.

371. *this*

*ara
CA a, ar 7 14 15; are 37; ara 34; CI ara 67.

Cf. SE ara; KA aro *this*. CC has forms with initial /k/ : kara 61; ka 50 65.

372. *thorn*

*(y)iTi
CA ici 7; ic 14 15 28; iti 29; iri 35 37; iiri 39; CC iti 47 48 61 65; yiti 50; CI iti 67.

Cf. SE iti, KA iki, IR igi-ra *thorn*.

373. *thorn* *fa
CA fa 7 14 15; SE fa.
Long sharp thorn, spine on back of fish.

374. *thought* *minip
CA minip 7 14 15, 29, 35; CC minip 61;
CI binip 67.
Cf. SE mipo, KA mipi, MO minif *thought.*

375. *to throw away* *iwi-asom-, *kom-asom
CA iwasom- 7; wiasam- 14 15; yasom- 1;
CC yasom- 47 48; yosöm- 61; CI zasom- 67.
CA komasem- 35 37; kom- 36; komo- 39;
komaham- 43.
Cf. SE iwi-homo-, KA ii otomo- *to throw away.* <komasem> means *to throw away* only in KN and SO; the KW form komasam means *to break a (small) part off a whole.* Probable cognates in other languages are SE kokomo- (repetitive of komo-) *rub off, wipe clean*; KA komo- *push away/off.*

376. *thumb* *mitut
CA mitüt 61; metet 7 14, 29, 35; CI bitit 67.

377. *thunder* *wuru
CA wur 14 15 22 24 25 28, 29, 35 37; wir 7;
CC wur 61; wuru 48 62; CI vii 67.

378. *to tie* *yik-
CA yik- 7 14 15 18, 29, 35; CC yik- 61;
Cf. SE eka- *to tie.* yik- means *to tie up, to tie together.*

379. *to tie* *mot-
CA mot- 7 14 15; SE mota-; KA moke-.
To fasten one end of a length of rope or string to something.

380. *tight, hard* *pepe
CA pepe 7 14 15; IR bebe-ra; SE pepe-.
CA: *tied tightly*; IR *hard*; SE: *to be tied firmly.*

381. *today* *wawa

CA wow 7 14 15 22 24 28; waw 29; wo 35 37 39; CC wo 61; CI vawa 67.

Cf. SE, KA wawa *today*.

382. *tomorrow* *to(a)

CA to 1 7 14 15 22 24 28, 29, 35 37 39; CC to 61; CI tuá 67.

In KW, to also means *yesterday*. Cf. SE toá, KA koá *yesterday*.

383. *tongue* *(k)omane

CA koman 1-5, 30 31 34, 36; komen 7 14-17 22 24 26-28, 29, 42; komən 36 39; komn 35; komne 37; CI kömen 67; NA omane 93; emene 86 89 90.

One of the few cases in which CA and CI seem to have retained an initial /k/ which was dropped elsewhere; cf. SE omane, KA mare, IR amada *tongue*. CC has a different word: maneke. See also *two*, no. 394.

384. *tooth* *sisi

CA sis 1-18 22 24 26-28, 42-45; sisi 31-34, 35-37 39; CC sisi 48 53; sis 61-65; CI sisi 67, 83; NA sise 89 90 93; sis 86.

385. *top* *imu/umu

CA imu 1; umu 14 15; imi 7, 29, 35; CI ümu 67.

14 15: *top of an object, crown of a palm tree.* See also *full*, no. 157.

386. *top* *amis(i)

CA amis 7 14 15; SE amihi.

7 14 15: *top of a tree.*

387. *tree* *wose

CA os 1 7 14 15 24 28; wos 34, 39, 42; wes 29 30, 35-37; CC ose 47 48 53; wese 61 65; CI usu 67; NA ose 93; wəs 86 89.

388. *to tremble* *titi-/tete-

CA titi- 7 14 15; tete- 29; tiriri- 35; CC tete- 61.

389. *trunk*

*mopane

CA mopan 7 14 15 24 28; mapan 1, 34; mopon 26; mapn 37; CC mapan 47 48; mapane 61 65.

The CA forms also mean *stem of a tree, origin*. Cf. SE mopane, KA mapare *trunk, base*.

390. *to turn oneself*

*pay-

CA pɑy- 7 14 15; KA pay-.

391. *turtle*

*mu(a)

CA mu 7 14 15 28, 29 30, 35-37 39; CC mua 61.

392. *tusk*

*okose

CA okos 7 14 15; okse 37; okose 39; CC okos 50 61 65.

393. *two*

*yaminuk

CA yamnuk 7 24 26, 29; yamnok 14 15, 43; amənuk 27; yomnok 35 37; imnuk 39; CC amini 48; amin 61; CI zamnik 67; NA yamnok 93.

Cf. SE yamina, KA yamane *two*.

394. *two*

*kapom

CA kapom 7 14 15; KA aboma; IR aboma.

CA kapom means *double*; the KA and IR forms are glossed *two*. The KA form was noted in Nagramadu, the westernmost part of the Kamoro language area. CA seems to have retained an initial /k/ which was dropped in KA and IR, see also *tongue*, no. 383.

395. *unripe*

*ofo(-kot)

CA ofo 1 7 14 15 28, 29, 35, 43; CC ofokot 61.

For -kot see 6.2. The same 'ending' also appears in *skinny*, no. 337.

396. *urine*

*yi

CA i 7 14-17 27 28, 42 43; ii 35 37 39; CC yi 48 61 65; CI ii 67.

397. *vagina*

*Tani

CA can 28; cen 3-16 18 27; cən 22 24; tene 35; teni 29; tini 37 39; CC tani 61; tane 65; CI tani 67.

398. *vagina* *per(e)

CA per 14 15; SE, KA pere.

The SE and KA forms are glossed *vagina*. 14 15: *mating of animals* (14: fa per, literally *joining from behind*). The same morpheme per is perhaps also found in mopere, mokoper *navel*, no. 251.

399. *vein* *fima(-pir)

CA fim 1 7 14 15 27 28, 43; fima 30, 36 37; fimi 39; CC fima 48 53 61 62; NA fimipir 86; fimepi 89.

Cf. SE fumapi, KA ima *vein*. Probably *fimapir was a compound, but the second constituent could not be identified.

400. *to vomit* *mo-

CA mo- 7 14 15, 29, 35 39; CC mo- 61; CI bo- 67.

Cf. SE mo-, KA mao- *vomit*.

401. *wasp sp.* *mako

CA mak 7 14 15; mako 37; KA ii moko.

402. *wasp sp.* *i(f)i

CC ii 61; SE ifi; KA ii.

403. *wasp sp.* *yupay

CA yupuy 14 15; yipae 7; CI zipay 67.

404. *water* *muʃ

CA mu 1 14 15, 38; muʃ 7, 29, 30 32 34; muy 22 24-28; mi 35-37 39, 42-46; CC mi 47 53 62; mii 48 61; CI bii 67, 83 84; NA mi 86; mu 89.

405. *wave* *wáo

CA wa 7; wo 14 15, 37; SE, KA wao.

406. *we* *naro

CA nar 1 7 14 15 27, 29, 35 37, 43; CC nar 61; naro 47; CI dar 67.

407. *wet*

*moTo(k)

CA moco 1 7 14 15 28; morok 35 37 39; maro 43; CC murutu 47; murut 61; CI boto 67.

Cf. SE motoko, KA moko *wet*. The CC forms are irregular in that they have -r- instead of -t- and -t instead of -k. See also *straight*, no. 359.

408. *where*

*uTar(e)

CA 14 15 ucar, KA okare.

409. *white*

*fasa(ka/r)

CA fasak 14 15; fesak 7; fesaka 35, fasar 29; fase 43; CC fasak 47; faser 48; fasar 65.

The SE and KA cognates are hako and tako respectively; both mean *white*. The etymology of the Asmat forms is unclear (perhaps fa-sako *white-bottomed*?). -ka and -r may have been affixes.

410. *white*

*napi

CA napi 7 14 15 22 28; nipi 35 37; CI dapi.

14 15: *light coloured; conspicuous because of light colour*. The KA cognate, napu, is glossed *light coloured of skin*. IR has nobura, nabura *white*.

411. *who*

*Tar

CA ca, car 7 14 15 28; ta 37; CI ta 67.

KW ca, car are allomorphs.

412. *wife*

*-emo

CA -em 1 7 14 15 26 28; -emo 29, 39; -mo 37; SE -amo; KA -eámo.

413. *wind*

*fo

CA fo 1 7 14 15 18 22 24 26 28, 29; CC fo 47 48 61 62.

414. *wing*

*yaoro

CA yaro 28, 36; yaoro 29; yəro 14 15; yoro 7; yera 37; yora 35; CC yari 48 61 65; yarmak 47; CI zör 67.

yarmak : a compound of *wing* and *bone*, no. 46.

415. *woman* *TawoTa

CA cowuc 14 15 22; cawuc 26; cowoc 1 5 7; taot 42; toot 29; toor 35-37 39; CC taot 47 48 53 65; towot 61; CI taot 67; NA toor 89.

416. *wound* *naso

CA noso 1 7 14-16 22 24 28, 29, 35 37; CC nasu 47 48 61 65; CI dasö 67; NA nusu 89.

417. *you sg.* *woro

CA or 1 7 14 15; wor 29; wo 43; wer 35-37; CC oro 61; woro 47; CI wor 67; NA we 89 90.

CI wor : from Drabbe's list. One would expect Bromley to write vor, see 5.2.

418. *you pl.* *Tara

CA ca, car 1 7 14 15; tar 29, 35 37; ta 43; CC tara 61; CI tar 67.

KW ca, car are allomorphs.

POSTSCRIPT

Calvin Roesler, T.E.A.M. linguist stationed at Ayam, kindly sent me the new data listed below after he had read the manuscript of this monograph. Unfortunately they arrived too late to be worked into the body of the text. I have sub-divided them into six points, cross-referenced to the relevant sections.

1. (Sections 3.1.1, 3.1.2.1, p. 15): Geminate consonant clusters do seem to occur in KW, at least in normal and slow speech.

   In some inflected verbs at least four vowels occur in sequence. In the Simai sub-dialect as spoken in Ayam no vowel sequences are found in monomorphemic words.

2. (Section 3.1.2.2, p. 17): The Ayam communalect has a labialized series of consonants: /pw/, /mw/, and /fw/; [b, ɓ, p] do not seem to occur as allophones of /p/, and /t/ never has a nasal release.

3. (Section 3.1.2.2, p. 21): In Yaosakor (KP), [e] and [ɛ] seem to be separate phonemes.

4. (Section 3.2, p. 23): The anteriority forms are very restricted in the Simai sub-dialect. They are found only in the oral literature.

5. (Sections 3.2, 3.3.1, p. 24): Roesler regards the form awun as a fourth pronoun suffix, e.g. nor-awun *I without the presence of others mentioned in the context.* [awun is found also in the Flamingo Bay area but was not analysed as a suffix in Voorhoeve 1965.]

   The villages Mecow and Yuni are definitely Simai although they have their own linguistic peculiarities. Muet belongs to KP but also has its own peculiarities. During the last 10-15 years

several smaller groups (Minipo, Amnes, and others) have moved in with Muet. Their speech is somewhat different from the Muet variety of KP and it is not certain whether it belongs to this dialect. [Maps iii, iv, and v have been corrected accordingly.]

6. (Section 5.1, p. 35): Tamanim (no. 68) is not a Citak speaking village. People from the KP dialect of CA can communicate quite well when they are at Tamanim. Roesler however is not sure whether the Tamanim communalect belongs to KP or to SO. The unlocated village of Wowi probably is the same as Wooi (no. 46).

APPENDIX I

Index of English Glosses in the List of *PA Reconstructions, Chapter 8

Each gloss is followed by the list number(s) of the entry or entries in which it is found. Non-bracketed numbers indicate that the gloss appears as a main gloss directly after the list number; a bracketed number indicates that the gloss is mentioned in the notes to the reconstruction. The following abbreviations have been used: v. = verb, sp. - species, n. = noun.

APPENDIX II

Index of Words in the Asmat and related Languages in the List of *PA Reconstructions, Chapter 8

Each word is followed by a language identification and the list number or numbers of the entry or entries in which it is found. A number in brackets indicates that the word is found only in the notes to the entry.

akut CI 172

akwere KA 211

am CA (256)

am- CA 353

ama NA 48; CA (256)

amada IR (383)

amako KA 269

amam CA 48; CI 190

amamuru KA 190

aman CA, CC, CI 195; CA 47

amap CC 190

amapo CC 190

amapoto SE (190)

amas CA 306

amat CA 269

ame CA 47, 344

amen CA 195

amepi CC 16

amer CA 88; CA, CI 344

amernak CA 344

amerto CC 344

ames- CA, CC 216

ames CA, CI 306

amәne CA 195

amәnuk CA 393

amihi SE 386

amin CC 47, 393

amine CA 47

amini CA 47; CC 393; SE (343)

amis- CA, CC 216

amis CA 386

amne CA, NA 47

-amo SE 412

amo NA 48

amom CC 48

amon CA, CC 47

amop CA 190

amos CA, CC, CI, NA 306

amos- CI 216

-amos CA 3

amosa CC 306

amse CC, NA 306

amum CA 48

amun CA, CC, CI 47; CA (343)

amunia IR (343)

amup CA 190

amus CI 306

amwa IR (190)

an MO (68); CA 311

anako CC 90

anәra IR (68)

ani CC, CI 68

anmewit CA 68

anok CA 90

anokos CA 68

anuk CA 90

ao mare KA 259

áo CA, CC 49; CI 278

aó CA, CI 52

-áoc CA 54

e CA 87, 213, 221, 369

eá CA, NA 213; CA 369

eák CA 115, 182; CC 182

eáktan CA 182

eákten CA 182

-eámo KA 412

eco CA 152

ée CA, NA 87, 213

eé CA 369

ef CA, CC 134

efe CA, CC 134

ek CA, CC, CI 155; CA 358

eka- SE (378)

eka CA, CI 358

ekcan CA 182

ekco CA 209

eke CA, CC, KA, SE 358; CC 152; CI 182

ekerə IR 358

-em CA 412

em- CA, CI 107, 353

em CA, CC 107

ema CA, CI 32; KA (252)

emak CA,CC,CI 46; CA (12), 369.

emake CA 46; SE (46)

emakə NA 46

eme NA 32; CA,CI,NA 111

emen CA (326); CC 326

emen nas CA 59

emene NA 383

emenmak CA 326, (59)

emenmeten CA (59)

emenmo CA (13); CA, CC 59

emenpa CA (317)

emer CC 32; CA 359

emere CA 32

emeret CC 359

emero CA 359

emimak CA 326

emin CA 326

emin nes CA 59

-emo CA 412

emor CA 32

emore CA 32

-emsi CA 334

emtow CA 359

en CA, CI 26

ena CC 242

enam CC 139

enam pa CA (317)

enamo CA 139

enaw- CA, CC, CI 80

enay SE (242)

ene CA, CI 26; CC 221; CA 242

enea KA (242)

enew CA, CC 242

enəmo CA 139

enmo CA 139

enom CA 139

kawi	CA 279
kay-	CA, SE, KA 336
kay	KA (29)
kee	CA 279
kekere	KA 250
kema-	KA (163)
kepare	KA (199)
kewa-	KA (365)
ki-	KA 95
kiki	CA 250
kimi	KA (184)
kini-	KA 170
kiri	KA 2
koá	KA (382)
kok	CA 102
kokomo-	SE (375)
kom-	CA 375
komaham-	CA 375
koman	CA,CC,CI 202; CA 383; CC 208
komane	CA 202
komasam-	CA (375)
komasem-	CA 375
kome	CA, NA 202
komen	CA, CC (137); CA 383
kömen	CI 383
komet	CI 347
komən	CA 383
komn	CA 383
komne	CA 202 383
komo-	CA 375; SE, KA (375)
komon	CA 202
kop	CA (328)
kopane	KA 154
kora-	SE 166
kore-	CA 166
korni-	CA (166)
koro-	KA 166
ku	KA (62)
kuis	CA 181
küis	CI 181
kuisi	CC 181
kuman	CA 202
kumin	CA 202
kumir	CA 347
kumiri	CA 347
kumit	CA 347
kupu	CA (16); CI 16
kus	CA 181
kus cənam	CA (82); CA, CI (182)
kusi	CC 181
kuus	CA, CI 181
ma	CA (115) 244
ma-	CA 93
maake	SE 356
maaro	SE (218)
mac mac-	CA 91
maek	CA 23
maét	CA 354

mew CA 149

mewer CA 355

mewit CA (68)

mewor CA 274 355

mey CA 149

mi- CA, CI 31

mi CA.CC,CI 31; CA (116); CA,CC 220; CC 257; CA 260; CA,CC, NA 404

mia CA 244

mic CA 297

micin CA 153

mii KA (162); CA 162 257; CC 404

mĭi CA, NA 149

mim CA 301

mimak CA, CC 260

mimi CA, CC 301; SE (301)

mimuk CA 260

min CA 261 (123)

mina KA 261 (123)

mini CA, CC 345

minif MO (374)

minip CA, CC 374

minip pim- CA 370

minip pum- CA 370

minipin CA, NA 150

miniw CA 345

mipi KA (364) (374)

mipi popo- KA 370

-mipic CA 193

mipo SE (374)

mipo popom- SE 370

mir CA 101

mira CA 246

mire CC 101

miri CA 101 297

mis fin CA (367)

misa CA (23)

misak CA, NA 367

misaka CC 367

misa-tiw CA (367)

misin CA 314

misini CC 314

-misom CA 210

misun CA 314

misün CA 314

mit CC 246 297

mita CA, CC 246

mitakas CA 5

mitaw MO (312)

mite CA 246

miti CA,CC,CI 246; CA 297

mitin CA, CI 153

mitn CA 153

mitüt CA 376

miü CA 162

miw CA 162 257

miwi KA (162)

miwihi SE 193

wane NA 331; CA, NA 368

wanöe CA 368

wanü CA 368

wao CA 64; KA 151 (223); KA, SE 405

-wáoka KA 54

-waot CI 54

wap CA 261

wapak CC 261

warak CA 219

waren CA 350

warkay CA 219

was CA 160

wasa CA, NA 272

wasan CA 151

wase CA, CC 272

wasem- CA 357

wasen CA 151

wasene CC 151

wasi CA 272

wata KA 160

watae KA (272)

watne NA 350

wauc CA 69

waw CC 64; CA 381; SE (223)

wawa SE (223); SE, KA (381)

wawi CC 74

wawku KA (69)

way SE (69)

wayku KA (69)

we CA 151; KA (278); NA 417

wehe SE (241)

wen CA 267

wene CA,CC,NA 368

wenem CA 338

weni SE 267

wer CA 417

werak CA 219

wes CA 387

wese CC 387

wetene CC 350

wetn CA 350

wəra NA (152)

wəs NA 387

wi CA 273

wia KA (273)

wiasam- CA 375

-wic CA 132

-wiko CA (132)

wir CA 377

wiri KA 57; CA, NA 171

wiri wir- CA 212

-wito SE (132)

wo KA 55; NA 64; CA, CI 223; CA, CC 280; CA, CC 381; CA 405,417

wö CI 87

wokone NA 199

wom CC 104; CA 229

womo CA 229

wonamo CA 338

APPENDIX III

Approximate Numbers of Speakers of Asmat Languages

The figures presented below have been taken from the 1967 census as quoted in the *Asmat Sketch Book*, vol. 2, 1970:111-112. Some gaps have been filled by taking figures of the 1961 District Health Centre Census quoted in Van Amelsvoort 1964:192-194. Only for Ayam (7) a recent figure was available[60]. The villages Mecew (10), Yuni (11), and Muet (12) have been assigned their correct place in the list according to the dialect information received from C. Roesler (postscript pt. 5, p. 122).

Central Asmat		22,800
Kawenak		13,800
1	As-Atat	487
2	Nakai	344
3	Kapi	287
4	Ao	269
5	Yamas	947
6	Yaun-Yuferi	545
7	Ayam	1,750
8	Warse	633
9	Amorep	443
10	Mecew	142
11	Yuni	101
13	Ewer	774
14	Suru	800
15	Yepem	386

[60] C. Roesler, personal communication 1979. He mentioned that not only Ayam but some of the other villages too have increased considerably.

16	Per	321
17	Uwus	374
18	Meriten	
19	Miwar	509
20	Atamuc	139
21	Ac	1,355
22	Amanamkai	725
23	Ar-Nanim	216
24	Amisu	293
25	Cowew-Yamew	126
26	Kawet	193
27	Yow	473
28	Omanesep	695
Keenakap		1,700
12	Muet	180
29	Namen	188
30	Miwar	115
31	Yaosakor	477
32	Kaimo	292
33	Awok	181
34	Fos	149
Keenok		6,200
35	Komor	746
36	Yipaer	701
37	Sawa-Erma	1,779
38	Mu-Akani	1,158
39	Manep	432
40	Monu	1,042
41	Temor	255
Sokoni		1,100
42	Mine	265
43	Sokoni	135
44	Wakanu	285
45	Yinak	140
46	Wooi-Karmis	165
Casuarina Coast Asmat		8,600
Matia		5,200
47	Otanep	1,100
48	Masim	659

49	Muepis	475
50	Nanew	247
51	Piramat	175
52	Maus	215
53	Makair	380
54	Taworo	?
55	Maintamor	358
56	Nertamor	231
57	Mayun	579
58	Simsakar	549
59	Sinakat	171
Sapan		3,400
60	Kayerin	400
61	Pirimapun	478
62	Aorket	445
63	Saman	443
64	Emine	284
65	Tareo	792
66	Semenoro	478
Citak Asmat		4,900
67	Senggo	552
68	Tamanim[1]	201
69	Epem	191
70	Abao	85
71	Fasera	53
72	Tiurubis	89
73	Vabak	92
74	Wautu	62
75	Tiau	156
76	Binerbis	71
77	Vau	210
78	Zuanakup	166
79	Birako	99
80	Togomau	157
81	Wagis	150
82	Ziobok	?
83	Upper Sirec	?

[1]See postscript point 6, p. 123.

84	Brazza River	?
95	Ekauw	149
	Sumasma[2]	437
	Bitneo	388
	Daiwar	50
	Agauw	65
	Tomauw	62
	Tayao	80
	Ver	81
	Somnak	89
	Bina	205
	Wowi[3]	128
	Amer	88
	Dianem	86
North Asmat		?
85	Sagopo	91
86	Ti	40
87	Yesoko	?
88	Awemu	?
89	Momogo	?
90	Pupis	119
91	Weyo	45
92	Emo-Espeno	?
93	Irogo	182
94	Yakapis	?

[2] Unnumbered villages have not been located and are therefore not shown on map III.

[3] See postscript point 6, p. 123.

APPENDIX IV

Phonetic Symbols used in the Text

			Voiceless	Voiced
Plosives:	bilabial:	plain	p	b
		labialised	p^{w}	
		prenasalised		^{m}b
		nasal release	p^{m}	
	alveo-dental:	plain	t	d
		palatalised	t^{y}	
		prenasalised		^{n}d
		nasal release	t^{n}	
		fricativised	t_{s}	$d_{z}, d_{\check{z}}, d_{ð}$
	alveo-palatal:	plain	č	ǰ
	velar:	plain	k	g
		nasal release	$k^{ŋ}$	
	uvular:	plain	q	
		nasal release	$q^{ŋ}$	
Nasals:	bilabial:			m
	alveodental:			n
Fricatives:	bilabial:		ᵽ	ᵬ
	labio-dental:		f	v
	interdental:		θ	ð
	alveo-dental:		s	z
	alveo-palatal:		š	ž
	velar:		x	ɣ
	uvular:		ɋ	
	glottal:		h	

			Voiceless	Voiced
Laterals:				ɭ, ǃ
Flaps:				ɾ̈
Rolls:				r̈
Semi Vowels:	bilabial:	front		ɥ̈
		back		w
	alveo-dental:			y

			Unrounded	Rounded
Vowels:	Front:	high-high	i	ü
		high-low	ɪ	
		mid-high	e	ö
		mid-low	ɛ	
		low-high	æ	
		low-low	a	
	Central:	high		ɯ̈
		mid	ə	
		low	ɑ	
	Back:	high-high		u
		high-low		ʊ̈
		mid	ë	o
		low		ɔ

BIBLIOGRAPHY

Abbreviations used:

ASB *An Asmat Sketch Book.* A publication of the Asmat Museum of Culture and Progress, Crozier Missions, Hastings, New England, USA.

NGS *Nieuw Guinea Studiën.* The Hague.

PL *Pacific Linguistics.* Canberra: The Australian National University.

VKI *Verhandelingen van het Koninklijk Instituut voor Taal-, Land- en Volkenkunde.* The Hague.

AMELSVOORT, V.F.P.M. van

1964 *Early Introduction of Integrated Rural Health into a Primitive Society.* Assen: Van Gorcum.

ARSDALE, P. van

1974 Report of an Expedition to the Interior Asmat and Citak Regions of Irian Jaya, Indonesia. Mimeographed.

1975 *Perspectives on Development in Asmat.* ASB 5 (2 vols).

BROMLEY, H.M.

1973 A Progress Report on Suggested Citak Orthography. Mimeographed.

1975 Further Notes on Suggested Citak Orthography. Mimeographed.

DONGEN, W. van
1970 'The Opening of the Keendok Area (1956-57)'. *ASB* 2: 24-38.

DRABBE, P.
1937 Woordenboek der Kamoro-Taal. Mimeographed.

1938 Woordenboek van het Sempanees. Mimeographed.

1953 *Spraakkunst van de Kamoro-taal*. The Hague: M. Nijhoff.

1959a *Grammar of the Asmat Language*. Syracuse: Our Lady of the Lake Press.

1959b *Dictionary of the Asmat Language*. Syracuse: Our Lady of the Lake Press.

1963 *Drie Asmat-dialecten*. *VKI* 42.

EYDE, D.B.
1967 *Cultural Correlates of Warfare among the Asmat of South-west New Guinea*. (Ph.D. thesis, Yale University) Ann Arbor: University Microfilms.

GEURTJENS, H.
1933 *Marindineesch-Nederlandsch Woordenboek*. Bandung: A.C. Nix.

HEALEY, P.M. and A. HEALEY
1977 *Telefol Dictionary*. *PL*, C-46.

KESSEL, C.H. van
1961 'De Casuarinakust van Zuidwest Nieuw Guinea'. *NGS* 5/4: 277-300.

McELHANON, K.A.
1971 'Classifying New Guinea Languages'. *Anthropos* 66: 120-44.

PIKE, K.L.

1947 *Phonemics: A Technique for Reducing Languages to Writing.* Ann Arbor: University of Michigan Press.

ROESLER, C.

1972 The Phonology of the Ajam Dialect of Asmat. M.A. thesis, Hartford Seminary Foundation.

SCHOOT, H.A. van der

1969 *Het Mimika- en Asmat gebied (West Irian) voor en na de openlegging.* Tilburg: H. Gianotten.

TRENKENSCHUH, A.

1970 'An Annotated Translation of *De Sociale Struktuur van de Asmatbevolking* : G. Zegwaard & J. Boelaars'. *ASB* 1: 17-47.

VOORHOEVE, C.L.

1965 *The Flamingo Bay Dialect of the Asmat Language.* *VKI* 46.

1975 *Languages of Irian Jaya: Checklist, Preliminary Classification, Language Maps, Wordlists.* *PL*, B-31.

Voorhoeve, C.L. *The Asmat languages of Irian Jaya*.
B-64, x + 187 pages. Pacific Linguistics, The Australian National University, 1980. DOI:*10.15144/PL-B64.1*